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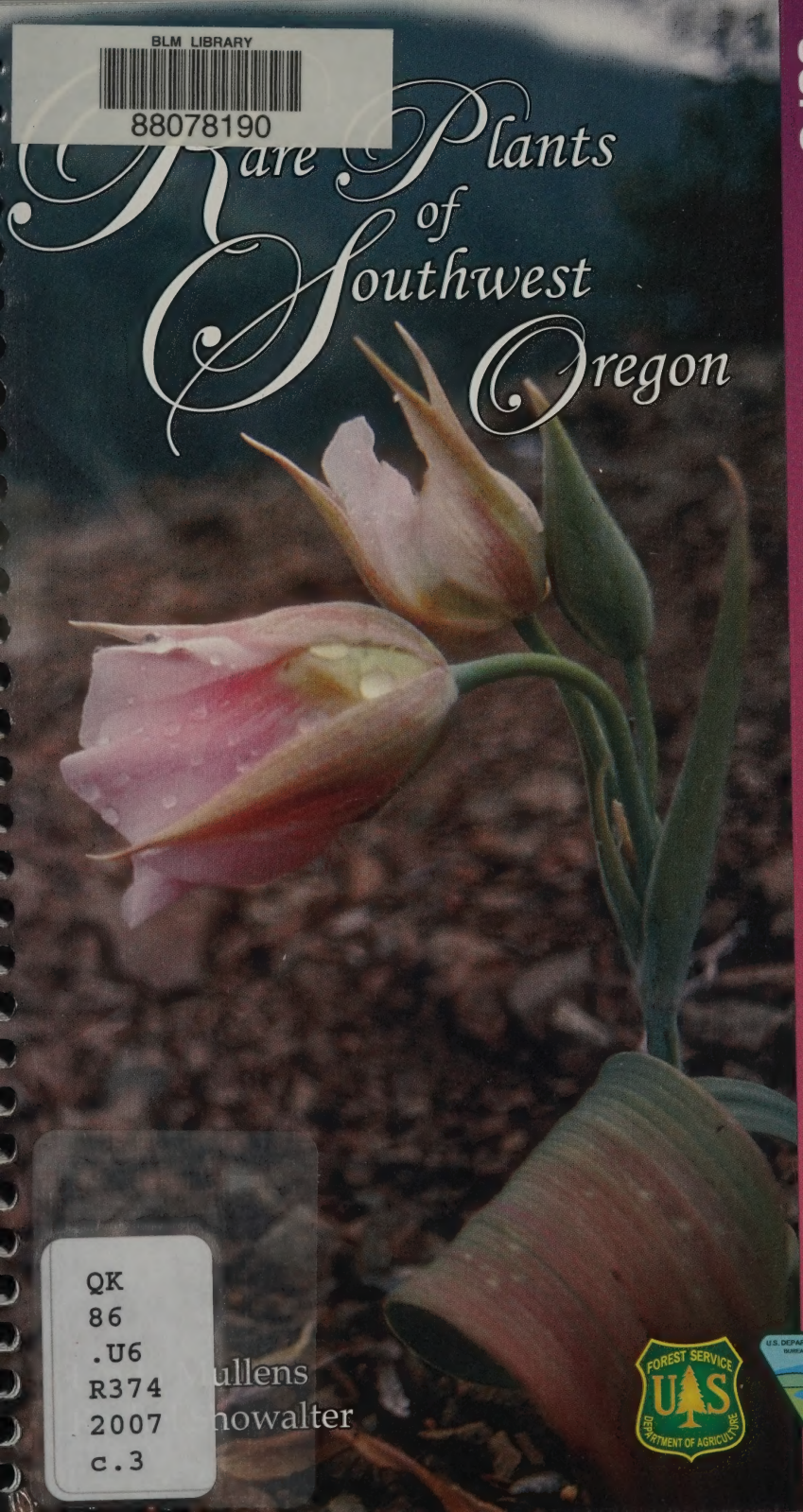

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Rare Plants of Southwest Oregon

Linda Mullens
Rachel Showalter

A Service First Publication

Spring 2007

Foreword

The Klamath/Siskiyou mountains of southwestern Oregon are noted for their diverse flora, rich in endemic species as a result of the unique geologic and climatic history of the area. This plant guide covers 143 of the rare and uncommon vascular plants documented or suspected to occur here in southwestern Oregon, on lands managed by the Medford District Bureau of Land Management, and the Rogue River – Siskiyou National Forest. Some of the plants also occur outside the area covered by this field guide.

This guide is not intended to be a compendium of all the "rare" plants found in SW Oregon; it includes species which are currently on or proposed for inclusion on the agencies "Sensitive" and "Special Status" lists, which encompass federally listed, state listed, Forest Service "Sensitive" and BLM "Sensitive and Assessment" vascular species. This Guide also includes most of the vascular species that could one day be federally listed. Other rare non-vascular plants (lichens, mosses, and liverworts) and fungi are not included in this guide. Agency lists do change through time, as do the status of species. Plants thought to be quite rare, after surveys and observation, may be found to be more common than anyone previously thought. Plant populations also can also be extirpated or lost, either from natural events like wildfire or natural succession, or from disturbances caused by man. Subsequent printings of this book will address these status changes.

This guide is not intended to replace rigorous taxonomic keys used to identify plant species. Familiarity with the Jepson Manual, Munz, Peck, Abrams, and the Flora of North America all are necessary at times to make a positive identification, especially for some of the more cryptic or diminutive species. Even the best botanist can at times be confused, so don't forget to consult with your local botanist!

This guide is intended to help botanists working for federal agencies and their partners, local professionals, and amateur botanists to understand and identify these select rare plant species. Any sightings of any of these species should be documented and turned into your local agency botanist. Please note exactly where you were, how many plants, habitat conditions etc....or preferably, use the agency rare plant sighting forms. Other information on these species can be found at the Oregon Natural Heritage Information Center at http://oregonstate.edu/ornhic. Please don't collect these species unless you are authorized to do so. Close up photographs or even line drawings are preferred to collecting plants, unless necessary. Enjoy!

- Mark Mousseaux,
District Botanist, Medford District BLM

Acknowledgements

This guide is a product of numerous individuals who generously contributed their knowledge and expertise. We offer heartfelt thanks to the following people; our number one project assistant, Lee Webb, who has been indispensable and a true pleasure to work with; Mark Mousseaux, District Botanist, Medford District BLM, and Wayne Rolle, Forest Botanist, Rogue River-Siskiyou National Forest, for the opportunity, support, and thorough editing they provided; Scot Loring, for providing a plethora of information differentiating our uncommon species from common look-alikes; Sue Vrilakas, ORNHIC, for answering our plea for species-related GIS information; Ryan Snider, Jody Thomas and Sean Mohren, for providing exemplary GIS assistance; Dr. Linda Hardison and the Oregon Flora Project, for the photographs and partnership; the Carex Working Group, specifically Barbara Wilson and Dick Brainerd, for providing great photos and advice; Kristi Mergenthaler, for providing 46 quality, complete species write-ups; Dr. Frank Lang, for the expertise and edits; Medford District Bureau of Land Management botanists Susan Fritts, Marcia Wineteer, and Brad Tong, who provided edits and answered the infamous 11th hour call for photo requests; Joan Seevers, Rob Huff, and the Interagency Sensitive Special Status Species Group at the Oregon State BLM Office, who felt this project was worth funding; Mike Hamel, Visual Resources Specialist, and Cliff McClelland, Printing Specialist, Oregon State BLM Office, for essential formatting advice and assistance; the Nature Conservancy, for their partnership, and for the many people who have contributed to editions of "A Guide to Rare Plants of the Siskiyou National Forest," the book which provided the foundation for our 2007 interagency publication. Our genuine gratitude is futher extended to the fantastic photographers involved in this project, especially our 'locals,' Norm Jensen, Scot Loring, John Erwin, Barb Mumblo, Lee Webb, and John Roth, who provided photos significant in both quantity and quality; all the people who gave us permission to incorporate their work into this non-profit document; a special gesture of appreciation goes to our field-going colleagues who have not only made their livelihoods searching for rare plants in southwest Oregon, but also shared the vision of one day producing a document like this - Richard Callagan, Richard Brock, and (again) Scot Loring - your edits and expertise have been essential; and finally, we would be remiss if we did not mention the exceptional emotional support our husbands provided while we worked countless hours on this publication - they have truly been the pillars of our families, and we appreciate them far beyond what we convey. This guide could not have been made without all of your contributions. *Thank you.*

~ Rachel & Linda

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Introduction

Oregon's Rare Plants

Rare plants are defined several ways. People in government and the public need to understand which plants are rare, so their populations can be protected, managed, and perhaps enhanced. This guide is not a comprehensive review of the literature dealing with rare plants. This field guide will give you an overview of why some plants are rare, what the terms "rare," "threatened," and "endangered" mean, and what laws protect rare plants.

What Is a Rare Plant?

"Biological rarity" in plants can be different from how the terms "rare," "threatened," and "endangered" are used by conservationists and described in the various conservation laws. Plants may be biologically rare because they are confined to a small area (endemics) or scattered in small numbers over a large area (or both). Some plants are restricted to uncommon habitats (such as ultramaphic soils). Plants may be biologically rare within one state, but common in another. The causes of rarity may be natural or human-influenced (such as when large areas of open habitat are converted to agriculture). When does a rare plant become threatened or endangered? "Endangered" and "Threatened" are legal definitions that vary among states, the federal government, and other organizations. Several major laws have been enacted to protect the rare plants of Oregon.

Federal Laws Protecting and Conserving Plants

[the five paragraphs below excerpted from the 2001 Illustrated Field Guide to Selected Rare Plants of Northern California © Regents of the University of California – used with permission.]

At the federal level, plants are protected by the Endangered Species Act of 1973 (ESA). This law, administered by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), provides a method of listing species (including subspecies) as officially endangered or threatened. However, the purpose of the ESA is not merely to identify plants as endangered or threatened, but to recover listed species to the degree that they no longer require the protection of the ESA. Thus, the USFWS and NMFS are required to develop recovery plans for all endangered or threatened species. "Endangered" is defined in the ESA as any species, including subspecies, "in danger of extinction throughout all or a significant portion of its range" (USC Title 16 Chapter 25). Varieties are considered subspecies. The ESA defines "threatened" as any species "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (USC Title 16 Chapter 25 § 1532).

As specified in section 4(c) of the ESA, the secretary of the interior is required to publish in the Federal Register a list of all species determined to be endangered or threatened. This is what it means for a species to be

"listed" or "federally listed." Listed species receive the full protection of the ESA. Before a species is listed, it must be "proposed" as endangered or threatened, which means that it is under consideration for listing and a "proposed regulation" (but not a final ruling) has been published in the Federal Register. Proposed species receive limited protection under the ESA. "Candidate" species are those being considered for listing but not yet the subject of a proposed rule. Species in this category are afforded no protection under
the ESA.

USDA Forest Service Sensitive Plant Management and
USDI Bureau of Land Management Special Status Plants

The Forest Service uses the term "Sensitive" for plants either known to occur or highly suspected of occurring on national forest lands, which are considered to be valid candidates for federal threatened or endangered classification under the ESA, or for which viability is a concern for other reasons. The Forest Service's Sensitive Plant Program develops and implements management practices to ensure that species do not become threatened or endangered due to Forest Service actions.

Species that did not meet the criteria for consideration in the Sensitive Plant Program but are of sufficient concern to be considered in the forest planning process have been designated Watch List Species or Species of Concern. These include species that are locally rare, of public concern, occur as disjunct populations, are newly described taxa, or are lacking in sufficient information on population size, threats, trend, or distribution.

The U.S. Department of Interior's Bureau of Land Management (BLM) is required to conserve and/or manage what are called "Special Status Species," which include federally listed and proposed species, federal candidate species, state-listed species, and sensitive species not meeting the above three criteria, but which are designated by the BLM state director for special management consideration. (This guide includes species which have Bureau Sensitive (BSO) or Bureau Assessment (BAO) ranking. In BLM Oregon-Washington, Bureau sensitive species are those taxa which are eligible for federal listed, federal candidate, state listed or state candidate (plant) status, and are on ONHIC's List 1. BAO species include those not included as federally threatened (FT), federally endangered (FE), federally proposed (FP), federal candidate (FC), State Listed or BS, and are on ONHIC's List 2.)

Oregon Natural Heritage Information Center –
the Basis for the Rare Plants listed in this Field Guide

[the paragraphs below excerpted from the ORNHIC 2004 booklet Rare, Threatened, and Endangered Species of Oregon – used with permission.]

The Oregon Natural Heritage Information Center (ORNHIC) is part of the Information Program of the Institute for Natural Resources of Oregon State University (OSU). ORNHIC maintains comprehensive databases for Oregon biodiversity, concentrating on the rare and endangered plants, animals and ecosystems. The program is managed by OSU, but has been a cooperative project, with significant support from The Department of State Lands, The Nature Conservancy in Oregon, USDI Fish and Wildlife Service (FWS), USDI Bureau of Land Management (BLM), the USDA Forest Service (USFS), and the Oregon Watershed Enhancement Board. Biologists working for these agencies, together with the state's herbaria and museums, provide most of the information that comprise ORNHIC's databases.

Every three years ORNHIC publishes a booklet called *Rare, Threatened, and Endangered Species of Oregon*. The next edition is due in 2007. ORNHIC welcomes additional information or recommendations regarding any of the species listed in their booklet. Such information, as well as data requests, should be directed to:

Oregon Natural Heritage Information Center
1322 SE Morrison Street
Portland, Oregon 97214
(http://oregonstate.edu/ornhic/).

The ORNHIC booklet encompasses four plant lists. Plants from List 1 and 2 are described in this Field Guide to Rare Plants of Southwest Oregon.

List 1 contains taxa endangered or threatened throughout their range or presumed extinct. The status of taxa on this list represents its status throughout its range.

List 2 contains taxa threatened, endangered or possibly extirpated from Oregon, but stable or more common elsewhere.

List 3 contains taxa for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

List 4 contains taxa of concern not currently threatened or endangered. This list includes very rare, but currently secure, taxa, as well as taxa declining in numbers or habitat, but still too common to be proposed as threatened or endangered.

Oregon State Endangered Plant Protection
In 1987, Oregon legislators passed Senate Bill 533 (unofficially the "Oregon Endangered Species Act") at the urging of the Native Plant Society of Oregon and others in the state's botanical community. This bill, and its accompanying statutes (ORS 564.100 through 564.135), directed the state

Department of Agriculture (ODA) to maintain a strong program to conserve and protect native plant species that may be threatened or endangered with extinction. The resulting Endangered Species Program (now integrated into the Native Plant Conservation Program in ODA's Plant Division) was initiated in 1988.

Since the program's inception, ODA has generally enjoyed strong support and cooperation from state and federal agencies in managing plant species officially designated as threatened or endangered by the State of Oregon (58 are on the current lists). With the exception of the state's ability to regulate the import, export, and commercial trafficking of threatened and endangered plants (under ORS 564.120), ODA's conservation authority concerning these species presently extends only to state-owned or state-leased lands. The statutes do not require private or federal landowners to safeguard species protected under state law, although ODA is willing to cooperate with the owners or managers of such lands in conservation efforts if they request assistance.

For further information, contact:

Native Plant Conservation Program
Oregon Department of Agriculture (Plant Division)
Department of Botany and Plant Pathology
2082 Cordley Hall, Oregon State University
Corvallis, OR 97331-2902
Bob Meinke, Program Leader
(OSU Graduate Faculty, Courtesy) (541) 737-2317

ODA has also adopted administrative rules (OAR 603-73-001 through 603-73-0090) that describe departmental procedures for the state listing, reclassification, or de-listing of plant species as threatened or endangered; how to go about petitioning ODA for the listing or de-listing of a species; and the regulations and programs designed to assist and direct state land management agencies in their important roles involving native plant protection. If you are interested in learning how state agencies are required to protect listed plant species, or wish to review other laws and regulations governing threatened and endangered plant management in Oregon, you may download the complete rules at: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_603/603_073.html Alternatively, you may write to ODA and ask for a copy of the endangered plant species administrative rules (please cite OAR 603-73-001 through 603-73-0110). Address your request to:

Native Plant Conservation Program
Plant Division
Oregon Department of Agriculture
635 Capitol Street NE
Salem, OR 97301-2532

Species Status Table

Scientific Name	Page	Federal Status	ODA Status	BLM Status	FS Status	ORNHIC Status	Documented on BLM or FS Lands	Suspected on BLM or FS Lands
Adiantum jordanii	2	..	..	BAO	P	2	Both	..
Agrostis hendersonii	4	SOC	..	BSO	..	1-ex	..	BLM
Allium peninsulare	6	..	..	BAO	S	2-ex	..	Both
Androsace elongata ssp. *acuta*	8	..	..	BAO	S	2	..	Both
Arabis macdonaldiana	10	LE	..	FEO	S	1	FS	BLM
Arabis modesta	12	SOC		BAO	S	2	Both	..
Arabis suffrutescens var. *horizontalis*	14	SOC	C	..	S	1	..	FS
Arctostaphylos hispidula	16	SOC	..	BAO	S	2	Both	..
Arnica viscosa	18	..	..	BAO	S	2	FS	BLM
Asplenium septentrionale	20	..	..	BAO	S	2	FS	BLM
Aster breweri (Eucepahlus breweri)	22	..	..	BAO	P	2	BLM	FS
Aster vialis (Eucepahlus vialis)	24	SOC	LT	STO	S	1	Both	..
Astragalus californicus	26	..	..	BAO	..	2	BLM	..
Balsamorhiza hookeri var. *lanata*	28	..	..	BSO	..	1	BLM	..
Bensoniella oregana	30	SOC	C	BSO	S	1	Both	..
Botrychium crenulatum	32	SOC	C	..	S	1	..	FS
Botrichium pumicola	34	..	LT	..	S	1	..	FS
Brodiaea terrestris	36	..	..	..	P	2	..	FS
Bulbostylis capillaris	38	..	..	BAO	P	2-ex	..	Both
Calochortus coxii	40	SOC	LE	SEO	..	1	..	BLM
Calochortus greenei	42	SOC	C	BSO	..	1	BLM	..
Calochortus howellii	44	SOC	LT	STO	S	1	Both	..
Calochortus indecorus	46	..	LE	SEO	..	1-x	..	BLM
Calochortus monophyllus	48	..	..	BAO	S	2	BLM	FS
Calochortus nitidus	50	SOC	..	BAO	..	2	BLM	FS
Calochortus nudus (C. nutudus)	52	..	..	..	S	2	..	FS
Calochortus persistens	54	C	..	FCO	..	1	BLM	FS
Calochortus umpquaensis	56	SOC	LE	SEO	S	1	..	BLM
Camassia howellii	58	..	C	BSO	S	1	Both	..
Camissonia graciliflora	60	..	..	BAO	S	2	Both	..
Carex abrupta	62	..	..	..	P	2	..	FS
Carex capitata	64	..	..	..	P	2	..	FS
Carex comosa	66	..	..	BA	P	2-ex	BLM	FS

Scientific Name	Page	Federal Status	ODA Status	BLM Status	FS Status	ORNHIC Status	Documented on BLM or FS Lands	Suspected on BLM or FS Lands
Carex crawfordii	68	..	..	..	S	2	..	FS
Carex gynodynama	70	..	..	BAO	P	2	BLM	FS
Carex nervina	72	..	..	..	S	2	FS	..
Carex scabriuscula (C. gigas)	74	..	..	BAO	S	2	Both	..
Carex serratodens	76	..	..	BAO	S	2	Both	..
Carex sp. (C. klamathensis)	78	..	..	BSO	P	..	BLM	..
Castilleja schizotricha	80	..	..	..	S	2	FS	..
Cheilanthes covillei	82	..	..	BAO	P	2	FS	BLM
Cheilanthes intertexta	84	..	..	BAO	S	2	BLM	FS
Chlorogalum angustifolium	86	..	..	BAO	S	2	BLM	FS
Cicendia quadrangularis	88	..	..	..	..	2	..	FS
Cimicifuga elata	90	..	C	BS	S	1	Both	..
Cirsium ciliolatum	92	..	..	BSO	P	1	Both	..
Clarkia heterandra	94	..	..	BAO	S	2	Both	..
Collomia mazama	96	..	..	..	S	..	FS	..
Cryptantha milo-bakeri	98	..	..	BAO	S	2	Both	..
Cupressus bakeri	100	SOC	..	BAO	S	2	Both	..
Cyperus acuminatus	102	..	..	BAO	P	2	..	Both
Cypripedium fasciculatum	104	SOC	C	BSO	S	2	Both	..
Delphinium nudicaule	106	..	..	BAO	S	2	Both	..
Dicentra pauciflora	108	SOC	..	BAO	S	2	Both	..
Draba howellii	110	..	C	BSO	S	2	FS	BLM
Epilobium oreganum	112	SOC	C	BSO	S	1	Both	..
Epilobium siskiyouense	114	SOC	C	..	S	1	FS	..
Ericameria arborescens	116	..	..	BAO	S	2	FS	BLM
Erigeron cervinus	118	SOC	..	BAO	S	2	FS	BLM
Erigeron petrophilus var. *viscidulus*	120	..	..	..	S	2	FS	..
Eriogonum lobbii	122	..	..	BAO	S	2	FS	BLM
Erodium macrophyllum	124	..	..	BAO		2-ex	..	BLM
Erythronium howellii	126	..	..	BSO	S	1	Both	..
Eschscholzia caespitosa	128	..	..	BAO	S	2	BLM	FS
Festuca elmeri	130	..	..	BAO	S	2	Both	..
Frasera umpquaensis	132	..	C	BSO	S	1	Both	..
Fritillaria gentneri	134	LE	LE	FEO	P	1	Both	..
Fritillaria glauca	136	..	..	BAO	S	2	Both	..
Fritillaria purdyi	138	SOC	..	BAO	S	2	..	Both
Gentiana newberryi	140	..	..	..	S	2	..	FS
Gentiana plurisetosa	142	SOC	..	BSO	S	1	FS	BLM
Gentiana setigera	144	SOC	C	BSO	S	1	Both	..

Scientific Name	Page	Federal Status	ODA Status	BLM Status	FS Status	ORNHIC Status	Documented on BLM or FS Lands	Suspected on BLM or FS Lands
Hackelia bella	146	..	..	BAO	P	2	Both	..
Hastingsia bracteosa var. *atropurpurea*	148	SOC	C	BSO	S	1	Both	..
Hastingsia bracteosa var. *bracteosa*	150	SOC	LT	STO	S	1	Both	..
Horkelia hendersonii	152	SOC	..	..	S	1	FS	..
Horkelia tridentata ssp. *tridentata*	154	..	..	BAO	S	2	FS	BLM
Iliamna bakeri	156	..	..	BSO	..	1	BLM	FS
Iliamna latibracteata	158	..	..	BAO	S	2	Both	..
Keckiella lemmonii	160	..	..	BAO	S	2	FS	BLM
Leucothoe davisiae	162	..	..	BAO	P	2	Both	..
Lewisia leana	164	..	..	BAO	S	2	Both	..
Lilium kelloggii	166	SOC	..	..	S	2	FS	..
Limnanthes floccosa ssp. *bellingeriana*	168	SOC	C	BSO	S	1	Both	..
Limnanthes floccosa ssp. *grandiflora*	170	LE	LE	FEO	..	1	..	BLM
Limnanthes floccosa ssp. *pumila*	172	SOC	LT	STO	..	1	BLM	..
Limnanthes gracilis var. *gracilis*	174	..	C	BSO	S	1	Both	..
Lomatium cookii	176	LE	LE	FEO	S	1	BLM	..
Lomatium engelmannii	178	..	..	BAO	S	2	FS	BLM
Lotus stipularis	180	..	..	BAO	S	2	Both	..
Lupinus lepidus var. *ashlandensis*	182	SOC	C	..	S	1	FS	..
Lupinus x tracyi	184	..	..	BAO	S	2	FS	BLM
Meconella oregana	186	SOC	C	BS	S	1	BLM	FS
Microseris douglasii ssp. *douglasii*	188	..	..	BAO	S	2-ex	..	BLM
Microseris howellii	190	..	LT	STO	S	1	Both	..
Microseris laciniata ssp. *detlingii*	192	SOC	..	BSO	S	1	BLM	FS
Mimulus bolanderi	194	..	..	BAO	S	2	BOTH	..
Mimulus congdonii	196	..	..	BAO	P	2	BLM	..
Mimulus tricolor	198	..	..	..	S	2	..	FS
Monardella purpurea	200	SOC	..	BAO	S	2	BOTH	..
Navarretia heterandra	202	..	..	BAO	..	2	BLM	..
Nemacladus capillaris	204	..	..	BAO	S	2	BLM	FS
Ophioglossum pusillum	206	..	..	..	..	2	..	FS
Pedicularis howellii	208	..	..	..	S	2	FS	..
Pellaea andromedifolia	210	..	..	BAO	S	2	BLM	FS

Scientific Name	Page	Federal Status	ODA Status	BLM Status	FS Status	ORNHIC Status	Documented on BLM or FS Lands	Suspected on BLM or FS Lands
Pellaea mucronata ssp. *mucronata*	212	..	..	BAO	S	2	BLM	FS
Perideridia erythrorhiza	214	SOC	C	BSO	S	1	BOTH	..
Phacelia leonis	216	SOC	..	BSO	P	1	..	BLM
Pilularia americana	218	..	..	BAO	S	2	..	BOTH
Plagiobothrys austiniae	220	..	..	BAO	..	2	BLM	..
Plagiobothrys figuratus ssp. *corallicarpus*	222	..	..	BSO	S	1	BLM	FS
Plagiobothrys glyptocarpus	224	..	..	BAO	S	2	BLM	FS
Plagiobothrys greenei	226	..	..	BAO	P	2	BLM	FS
Plagiobothrys lamprocarpus	228	..	LE	SEO	..	1-X	..	BLM
Poa rhizomata	230	..	..	BAO	P	2	..	BOTH
Polystichum californicum	232	..	..	..	P	2	..	FS
Ranunculus austro-oreganus	234	..	C	BSO	..	1	BLM	..
Rhamnus ilicifolia	236	..	..	BAO	S	2	FS	BLM
Romanzoffia thompsonii	238	..	..	BSO	S	1	FS	BLM
Rorippa columbiae	240	..	C	..	S	1	..	FS
Salix delnortensis	242	..	..	BAO	S	2	Both	..
Saxifragopsis fragarioides	244	..	..	BAO	S	2	Both	..
Scirpus pendulus	246	..	..	BAO	S	2	Both	..
Scirpus subterminalis	248	..	..	..	S	2	FS	..
Sedum moranii	250	..	C	BSO	S	1	Both	..
Sedum oblanceolatum	252	..	C	BSO	S	4	Both	..
Senecio hesperius	254	..	C	BSO	S	1	Both	..
Sidalcea hickmanii spp. *nov.*	256	..	..	BSO	..	1	BLM	..
Sidalcea malachroides	258	SOC	..	..	S	1	..	FS
Sidalcea malviflora ssp. *patula*	260	SOC	C	..	S	1	FS	..
Silene hookeri ssp. *bolanderi*	262	..	..	BAO	S	2	Both	..
Solanum parishii	264	..	..	BAO	P	2	Both	..
Sophora leachiana	266	SOC	C	BSO	S	1	Both	..
Streptanthus howellii	268	..	C	BSO	S	1	Both	..
Taushia howellii	270	SOC	C	..	S	1	FS	..
Trillium kurabayshii (*T. angustipetalum*)	272	..	..	..	S	2	FS	..
Triteleia hendersonii var. *leachiae*	274	SOC	C	BSO	S	1	FS	BLM
Triteleia ixioides ssp. *anilina*	276	..	..	BAO	S	2-ex	..	BOTH
Utricularia minor	278	..	..	BAO	P	2	FS	BLM

Scientific Name	Page	Federal Status	ODA Status	BLM Status	FS Status	ORNHIC Status	Documented on BLM or FS Lands	Suspected on BLM or FS Lands
Viola primulifolia ssp. *occidentalis*	280	SOC	C	BSO	S	1	Both	..
Wolffia columbiana	282	..	..	BAO	S	2	..	Both
Zigadenus fontanus	284	SOC	..	BAO	P	2	Both	..

Please refer to the "Introduction" for complete definition of acroynms listed in this table:
BAO – Assessment Species
BSO – Sensitive Species
C – Candidate for listing as Threatened/Endangered
FCO – Federal Candidate – Oregon
FEO – Federal Endangered
LE – Listed as Endangered Species
LT – Listed as Threatened Species
P – Proposed for Sensitive status
S – Sensitive
SEO – State Endangered
STO – State Threatened
SOC – Species of Concern

Habitat

Note that a species may occur in more than one type of habitat. These general habitat listings are to be used as a guide; plants are not necessarily restricted to the habitats they are listed under.

COASTAL

Brodiaea terrestris
Sidalcea malachroides
Sidalcea malviflora ssp patula

RIPARIAN (stream sides, pond edges, etc)

Adiantum jordanii
Bensoniella oregana
Calochortus nudus
Carex nervina
Carex serratodens
Cyperus acuminatus
Erigeron cervinus
Hackelia bella
liamna latibracteata
Leucothoe davisiae

MOIST ROCKY PLACES

Adiantum jordanii
Asplenium septentrionale
Arabis modesta
Carex scabriuscula
Erigeron cervinus

WET AREAS, MOIST PLACES

Adiantum jordanii
Agrostis hendersonii
Bensoniella oregana
Botrychium crenulatum
Calochortus nudus
Carex abrupta
Carex capitata
Carex comosa
Carex crawfordii
Carex gynodynama
Carex interior
Carex nervina
Carex serratodens
Cicendia quadrangularis
Collomia mazama
?Cyperus acuminatus
Epilobium oreganum
Erigeron cervinus
Gentiana newberryi
Gentiana plurisetosa
Gentiana setigera
Hastingsia bracteosa var. atropurpurea
Hastingsia bracteosa var. bracteosa
Iliamna latibracteata
Leucothoe davisiae

SERPENTINE SOILS OR ROCKY AREAS

Arabis macdonaldiana
Arctostaphylos hispidula
Aster vialis
Calochortus coxii
Calochortus howellii
Calochortus indecorus
Calochortus umpquaensis
Camassia howellii
Carex scabriuscula
Carex serratodens
Cupressus bakeri
Epilobium oreganum
Epilobium siskiyouense
Erigeron cervinus
Erigeron petrophilus var. viscidulus
Erythronium howellii
Fritillaria glauca
Fritillaria purdyi
Lewisia leana
Limnanthes gracilis var. gracilis
Lomatium cookii (alluvial)
Lomatium engelmannii
Lomatium tracyi
Meconella oregana
Microseris douglasii ssp. douglasii
Microseris howellii
Monardella purpurea
Perideridia erythrorhiza
Phacelia leonis
Salix delnortensis
Sedum moranii
Senecio hesperius
Silene hookeri ssp. bolanderi
Streptanthus howellii
Tauschia howellii

SERPENTINE FENS OR WET AREAS

Carex scabriuscula
Carex serratodens
Carex sp. nov. (C. klamathensis)
Epilobium oreganum
Gentiana setigera
Hastingsia bracteosa var. atropurpurea
Hastingsia bracteosa var. bracteosa
Salix delnortensis
Viola primulifolia ssp. occidentalis

DRY ROCKY PLACES

Arabis modesta
Balsamorhiza hookeri var. lanata
Calochortus greenei
Calochortus persistens
Cheilanthes covillei
Cheilanthes intertexta
Cirsium ciliolatum
Cryptantha milobakeri
Cupressus bakeri
Delphinium nudicaule
Draba howellii
Erigeron cervinus
Erigeron petrophilus var. viscidulus
Eriogonum lobbii
Horkelia hendersonii
Iliamna bakeri
Keckiella lemmonii
Lewisia leana
Lupinus lepidus var. ashlandensis
Meconella oregana
Pellaea andromedifolia
Pellaea mucronata ssp. mucronata
Saxifragopsis fragarioides
Silene hookeri ssp. bolanderi
Taushia howellii

DISTURBED AREAS (Roadsides, clearcuts, burned areas, ditches)

Aster vialis
Cimicifuga elata
Collomia mazama
Ericameria arborescens
Iliamna latibracteata
Lotus stipularis
Mimulus bolanderi
Navarretia heterandra
Nemacladus capillaris
Ophioglossum pusillum
Rorippa columbiae
Sidalcea hickmanii spp. nov.
Solanum parishii
Sophora leachiana

OPEN FIELDS AND MEADOWS

Agrostis hendersonii
Androsace elongata ssp. acuta
Brodiaea terrestris
Bensoniella oregana
Bulbostylis capillaris
Calochortus nitidus
Calochortus umpquaensis (edges)
Camissonia graciliflora
Carex abrupta
Carex scabriuscula
Chlorogalum angustifolium
Cirsium ciliolatum
Erigeron cervinus
Erodium macrophyllum
Frasera umpquaensis (edges)
Fritillaria gentneri
Gentiana newberryi
Gentiana plurisetosa
Limnanthes gracilis var. gracilis
Lomatium cookii
Meconella oregana
Microseris douglasii ssp. douglasii
Microseris howellii
Microseris laciniata ssp. detlingii
Perideridia erythrorhiza
Phacelia leonis
Plagiobothrys glyptocarpus
Ranunculus austro-oreganus
Rorippa columbiae
Sidlacea malvaeflora ssp. patula
Solanum parishii
Triteleia hendersonii var. leachiae (edges)

OPEN WOODS AND CHAPARRAL

Arabis macdonaldiana
Aster vialis
Astragalus californicus
Balsamorhiza hookeri var. lanata
Brodiaea terrestris
Calochortus greenei
Calochortus monophyllus
Camissonia graciliflora
Carex abrupta
Chlorogalum angustifolium
Cirsium ciliolatum
Clarkia heterandra
Collomia mazama
Cupressus bakeri
Delphinium nudicaule
Ericameria arborescens
Erythronium howellii
Eschscholzia caespitosa
Festuca elmeri
Frasera umpquaensis
Fritillaria gentneri
Haplopappus arborescens
Haplopappus whitneyi var. discoideus
Iliamna bakeri
Iliamna latibracteata
Keckiella lemmonii
Lilium kelloggii
Lomatium engelmannii
Lomatium tracyi
Lotus stipulais
Lupinus tracyi
Mimulus bolanderi
Mimulus congdonii
Monardella purpurea
Pedicularis howellii
Perideridia erythrorhiza
Plagiobothrys glypthocarpus
Ranunculus austro-oreganus
Rhamnus ilicifolia
Senecio hesperius
Sidalcea hickmanii spp. nov.
Sidalcea malachroides
Sidalcea malviflora ssp. patula
Silene hookeri ssp. bolanderi
Solanum parishii
Sophora leachiana
Trillium kurabayshii
Triteleia hendersonii var. leachiae
Triteleia ixioides ssp. anilina

IGNEOUS OR PUMICE

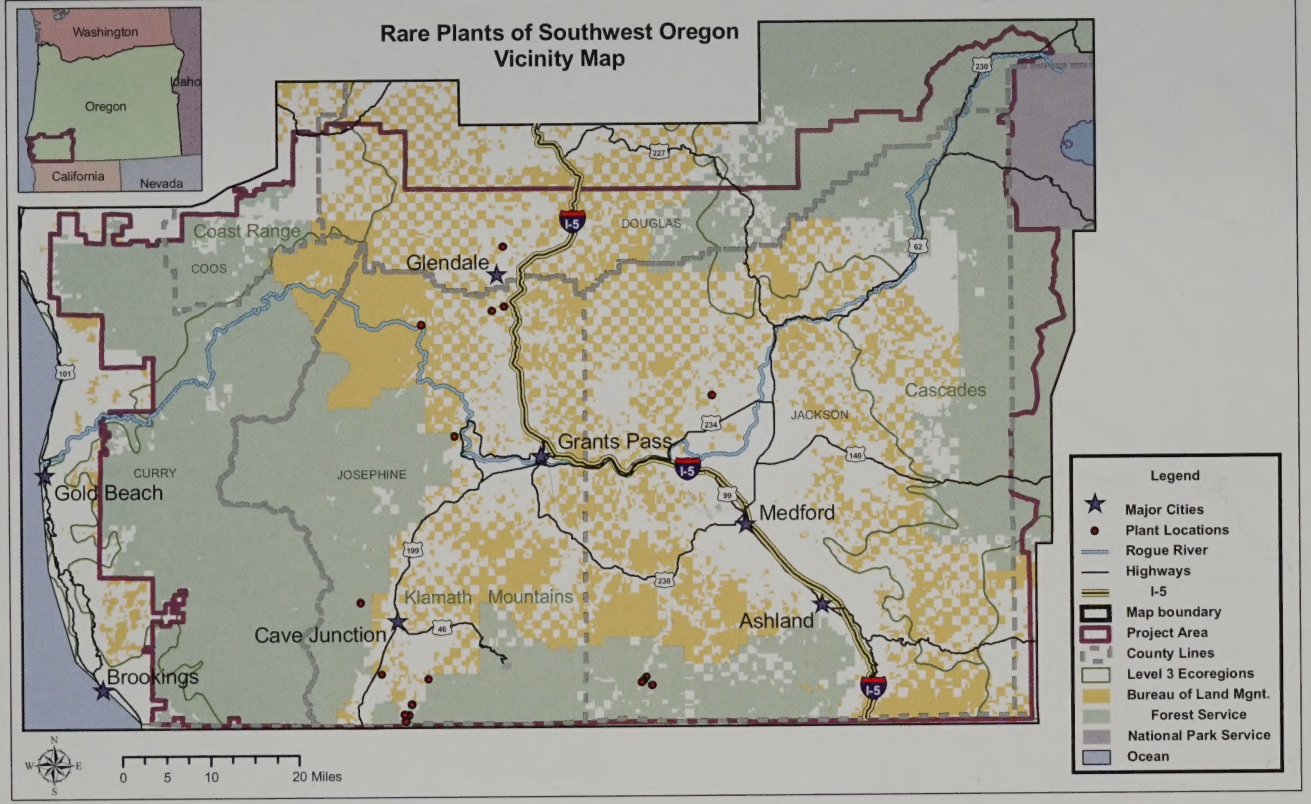
Arabis suffrutescens var horizontalis
Asplenium septentrionale
Botrichium pumicola
Iliamna bakeri
Horkelia hendersonii

OPEN SLOPES, OPENINGS IN FOREST

Aster vialis
Arabis macdonaldiana
Arctostaphylos hispidula
Calochortus greenei
Camissonia graciliflora
Carex gynodynama
Cimicifuga elata
Cryptantha milobakeri
Cupressus bakeri
Delphinium nudicaule
Epilobium siskiyouense
Eriogonum lobbii
Eschscholzia caespitosa
Frasera umpquaensis
Ericameria arborescens
Horkelia tridentata ssp. tridentata
Lilium kelloggii
Lotus stipularis
Lomatium engelmannii
Lupinus tracyi
Meconella oregana
Monardella purpurea
Nemacladus capillaris
Pedicularis howellii
Pellaea mucronata ssp. mucronata
Phacelia leonis
Polystichum californicum
Sedum oblanceolatum
Senecio hesperius
Sidalcea hickmanii spp. nov.
Solanum parishii
Sophora leachiana
Triteleia hendersonii var. leachiae
Zigadenus fontanus

FOREST

Aster vialis
Bensoniella oregana
Castilleja schizotricha
Cimifuga elata
Cryptantha milo-bakeri ??
Cupressus bakeri
Cypripedium fasciculatum
Frasera umpquaensis
Horkelia tridentata ssp. tridentata
Iliamna latibracteata
Keckiella lemmonii
Lilium kelloggi
Lomatium engelmannii
Lupinus tracyi (edges)
Pedicularis howellii
Phacelia leonis
Poa rhizomata
Polystichum californicum
Sidalcea malachroides
Trillium kurabayshii
Triteleia hendersonii var. leachiae


Rare Plants of Southwest Oregon
Vicinity Map
Washington
Idaho
Oregon
California
Nevada
Coast Range
COOS
DOUGLAS
Glendale
Cascades
JACKSON
Grants Pass
CURRY
Gold Beach
JOSEPHINE
Medford
Klamath Mountains
Cave Junction
Ashland
Brookings
I-5
227
230
62
101
234
140
99
199
238
46
N
W
E
S
0 5 10 20 Miles
Legend
Major Cities
Plant Locations
Rogue River
Highways
I-5
Map boundary
Project Area
County Lines
Level 3 Ecoregions
Bureau of Land Mgnt.
Forest Service
National Park Service
Ocean

Species Descriptions

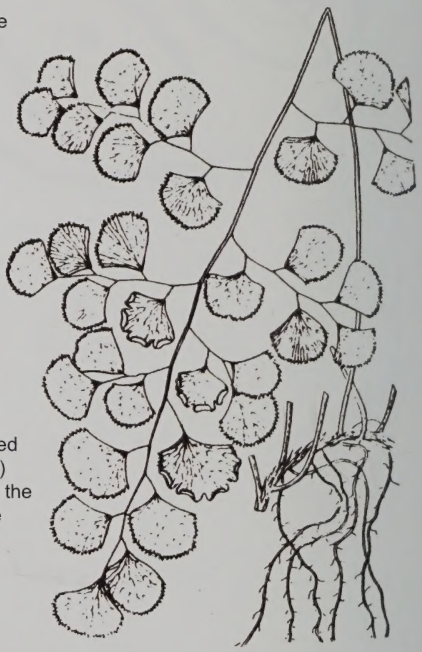
Code: ADJO

Scientific Name: *Adiantum jordanii* C. Muell.

Family: Pteridaceae (brake family)

Common Name: California maiden-hair

Plant Description: Leaf 20-50 cm, petiole reddish-brown to black. Blade elongate, 2-3 pinnate. Fan-like leaf segments are centrally attached at their bases and lobed 1/4 toward the base, generally with 4 or less irregular lobes, margins at segment base converging at 180-190 degree angles, midvein forked and not extending along margin. Sori and false indusia 1-3 per segment.



Illus: Abrams 24

Distinguishing Characteristics: The distinctive fan-like leaf segments are laterally attached and generally lobed up to 1/4 to the base.

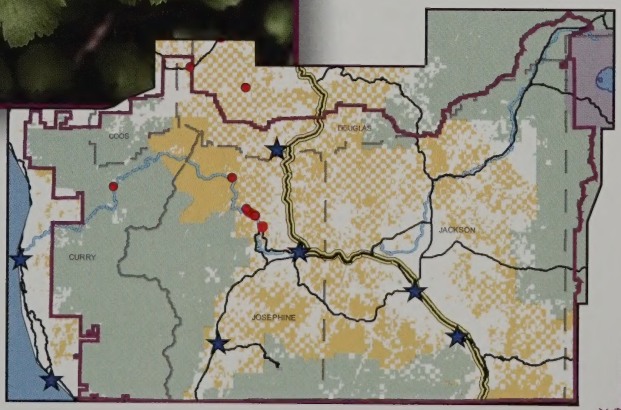
Similar Species: *Adiantum aleuticum* has palmate-pinnate leaves (a mix of the two forms), with segments laterally attached and cut up to 1/2 way (often with >4 lobes) towards the midvein, which extends along the margin. Blades of *A. jordanii* are elongate and have a continuous main rachis. *A. aleuticum* blade not elongate and has no continuous main rachis.

Habitat: Moist woods or shaded hillsides, seeps, riparian, and serpentine rock outcrops. Found on damp banks at the base of rocks or trees, 800-1,100 ft.

Distribution: Coos, Curry, Douglas and Josephine Cos. in Oregon; Cascade Range, High Sierra Nevada, and Coast Ranges in California from San Diego north.

References:

Abrams	Jepson
I-24	102


COOS
DOUGLAS
JACKSON
CURRY
JOSEPHINE

Code: AGHE3

Scientific Name: *Agrostis hendersonii* A.S. Hitchc.
(*Agrostis microphylla* Steud. var. *hendersonii* (A.S. Hitchc.) Beetle)

Family: Poaceae (grass family)

Common Name: Henderson's bentgrass

Plant Description: Loosely tufted annual, culms slender, 6-70 cm tall. Two to three stem leaves, 2-5 cm long, 1.5-3 mm wide, smooth and flat or slightly inrolled; ligule 1-4 mm. Panicle, spike-like, 2-9 cm long. Glumes, 5-7 mm, tip awn-like to acuminate; callus hairs around 7 mm. Lemma with tufts of hair at base, two teeth at apex, 2-4 mm long, awn arising from middle of back, 8-10 mm long and more or less bent; no palea.

Blooming Period: April - June.

Flower Color: N/A

Distinguishing Characteristics: An annual, awned bentgrass with a dense, cylindrical inflorescence, but without rhizomes or stolons. The slightly bent awn (8-10 mm long) is attached to the lemma at the middle of the back.

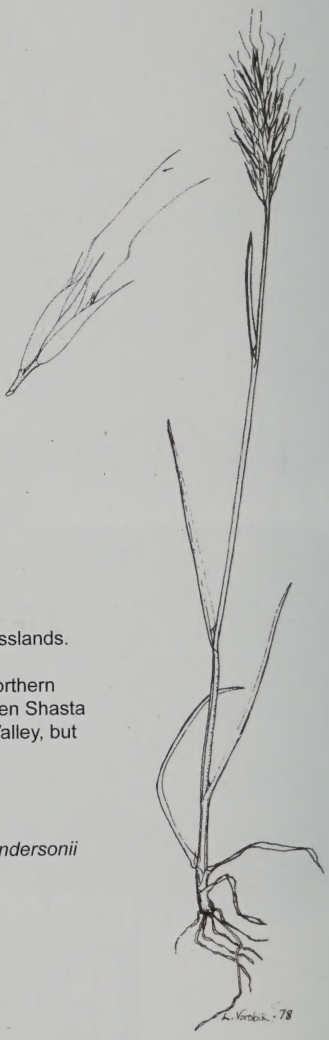
Similar Species: Another annual bentgrass, *A. microphylla*, is quite similar but the lemma is smaller, 1.5-2 mm, and the awn shorter, 4-8 mm.

Habitat: Vernal pools and damp areas in valley grasslands.

Distribution: Jackson Co. in Oregon (historical); northern California and the Central Valley of California between Shasta and Merced Counties. In 1930, collected in Sams Valley, but widely believed to be extirpated in Oregon.

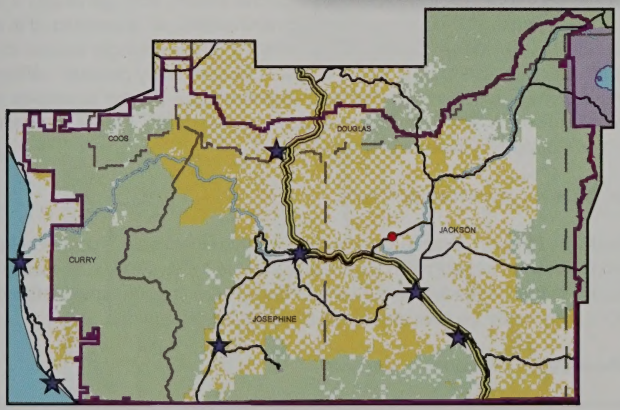
References:

Jepson	Meinke
1229	12
	A. microphylla var. *hendersonii*



Illus: Meinke 13

JEPS
95175
OR REFERENCE COLLECTION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JOSEPHINE

Code: ALPE

Scientific Name: *Allium peninsulare* J.G. Lemmon ex Greene

Family: Liliaceae (lily family)

Common Name: Peninsular onion

Plant Description: Bulb 8–15 mm, spheric to ± ovoid, outer bulb coat brown to gray, cell sculpture laterally elongate, V-shaped, herringbone-like. Leaves, 2-3, channeled to cylindric. Flowers generally 5–35, perianth parts erect with tips ± recurved, lanceolate to elliptic, entire or inner minutely dentate; ovary crests 3, minute and 2-lobed.

Illus: Abrams I-395

Blooming Period: July.

Flower Color: Red-purple.

Distinguishing Characteristics: The deep vertical herringbone sculpture on the outer bulb coat is distinct in our area, but you will need a microscope to verify this pattern. On a larger scale, look for 2-3 channeled to cylindric leaves, red-purple flowers, an ovoid to spheric bulb, and obvious sculpture (hand lens).

Similar Species: The inflorescence is widely spreading, similar to *A. campanulatum* in form, but that species has perianth parts 5-8 mm with a dark inner crescent compared to the longer 8-15 mm perianth parts of *A. peninsulare;* this species also has 6 ovary crests. The outer bulb coat of *A. amplectens* possesses a less distinctive irregular herringbone pattern and, generally, a red inner coat. Flowers pink to white and ovary has 6 prominent crests. *A. acuminatum* is a common onion in our area with 2-3 leaves, but the bulb coat sculpture is strongly square to polygonal; flowers are white to rose-purple with the inner perianth finely dentate. *Alllium bolanderi* is also similar, as it has a 'herringbone' bulb coat structure, but the structures are very fine, and almost indistinct. The bulb shape of *A. bolanderi* differs from *A. peninsulare*, as it is oblique and potato-like instead of onion-like.

Habitat: Moist to dry slopes and flats.

Distribution: Jackson, Wasco Cos. in Oregon (historical sites); common in middle and southern California and northern Baja California. In 1931, Peck collected a specimen along Highway 66 in the Cascades near Klamath Co. There is some speculation that the Oregon collections may really be aberrant forms of other Oregon onions.

References: Abrams I-395; Jepson 1181

COOS
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JACKSON
CURRY
JOSEPHINE

Code: ANELA

Scientific Name: *Androsace elongata* **L. ssp.** ***acuta*** (Greene) G.T. Robbins

Family: Primulaceae (primrose family)

Common Name: Long-stemmed androsace

Plant Description: Annual herb, 2-8 cm. Leaves, basal rosette, 5-20 mm long, tapered to petiole, entire or finely dentate, ciliate. Involucral bracts narrow-ovate, 3-5 mm long. Inflorescence scapose, ending in umbel, 1-6 unequal pedicels. Calyx tube whitish, tips reddish, lobes awl-like, tips stiffly acute; calyx greater than corolla.

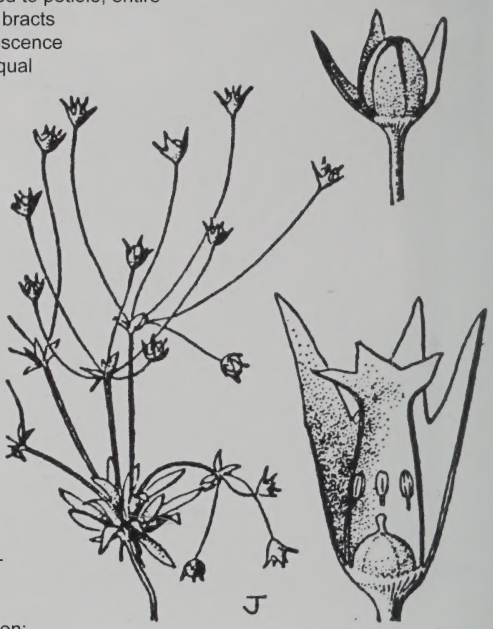
Blooming Period: March - May.

Flower Color: White.

Distinguishing Characteristics: Look for a scapose, umbellate inflorescence, uneven pedicels, a minute corolla (1-2 mm) shorter than the calyx, and puberulent herbage.

Similar Species: This species quite distinctive and other members of this genus do not occur in our region.

Habitat: Dry, grassy, usually north-facing slopes, below 3,500 ft.

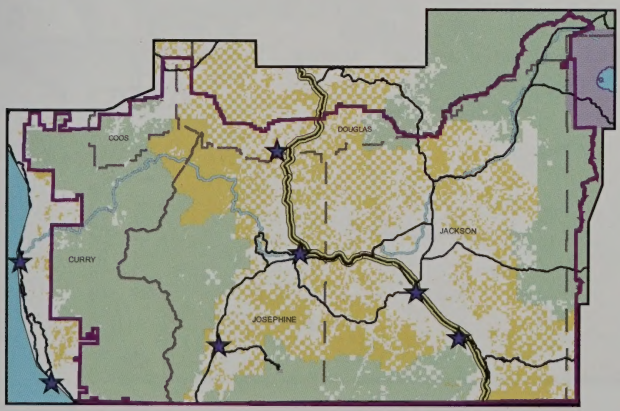


Illus: Abrams III-339

Distribution: Jackson Co. in Oregon; San Fransico Bay Area, San Joaquin Valley and South Coast in California. Howell collected a specimen from the Rogue River Valley in 1887; this species may be extirpated in Oregon.

References:

Abrams	Jepson
III-337	906
A. acuta	


COOS
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JOSEPHINE

Code: ARMA33

Scientific Name: *Arabis macdonaldiana* Eastw.

Family: Brassicaceae (mustard family)

Common Name: Red Mt. or McDonald's rockcress

Plant Description: 5-20 cm high. Leaves 1-2 cm long, 4-7 mm wide. Flower stalk 8-l0 mm long; sepals 5-6 mm; petals 9-11 mm long. Seed pods 3-4 cm long.

Blooming Period: May - June.

Flower Color: Petals rose-purple, sepals dark purple.

Distinguishing Characteristics: One of several closely related endemics evolved in the Siskiyou Mountains. Distinguished by being almost glabrous except for marginal hairs on the spatulate basal leaves. Seed pods 4 cm long.

Similar Species: *A. aculeoata* has simple bulbous-based leaf hairs. Some local collections appear to be intermediate between *A. macdonaldiana* and *A. aculeolata.*

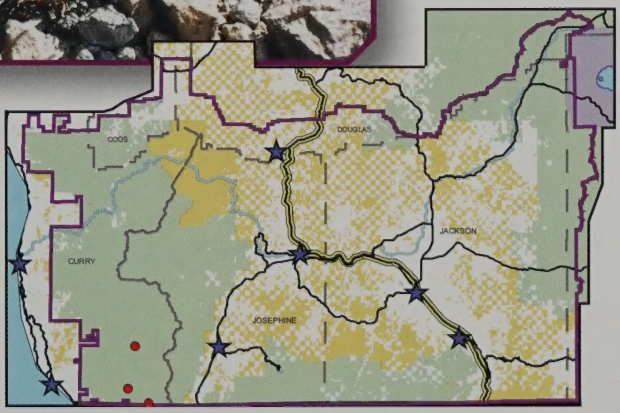
Habitat: On barren to shrub-covered, shallow, rocky, serpentine soils, rock outcrops, and Jeffrey pine woodlands at 500-5,800 ft.

Distribution: Small colonies in Curry Co., Oregon. Red Mtn. and Chetco Peak in Mendocino and Del Norte Cos., California.

References:

Eastman	Jepson	Meinke
21	402	2

Illus: Meinke 3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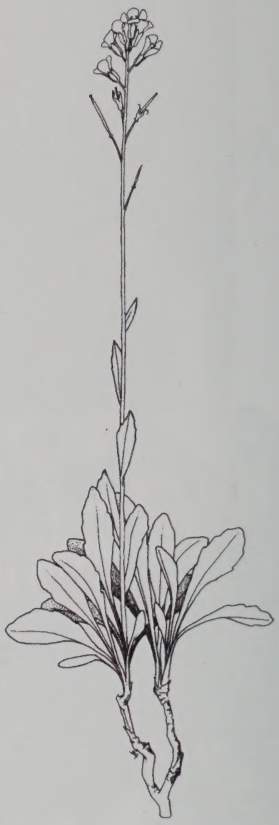
JOSEPHINE

Code: ARMO

Scientific Name: *Arabis modesta* Rollins

Family: Brassicaceae (mustard family)

Common Name: Rogue Canyon rockcress



Plant Description: Stems 1-few, branched at base, 2-5 dm high. Lower leaves obovate, 2-6 cm long, petioled, stem leaves sessile, 1-2.5 cm long. Petals narrowing toward base, 12-16 mm long, pedicels hairy. Siliques (fruits) ascending, hairless, 3-4.5 cm long and about 1.5 mm wide.

Blooming Period: March - May.

Flower Color: Purple to pinkish purple.

Distinguishing Characteristics: Plant covered with small, appressed, stellate (multi-branched) hairs of ± uniform size. Stem leaves without a petiole, but not clasping. Basal leaves have non-bulbous based hairs.

Similar Species: *Arabis modesta* differs from *A. oregana* in pubescence, the former having small, uniform, four-parted hairs, the latter possessing large forked or several branched hairs of varying sizes. Other look alikes include the Siskiyou *A. macdonaldiana,* which is essentially hairless, and *A. aculeolata,* which has simple bulbous-based leaf hairs.

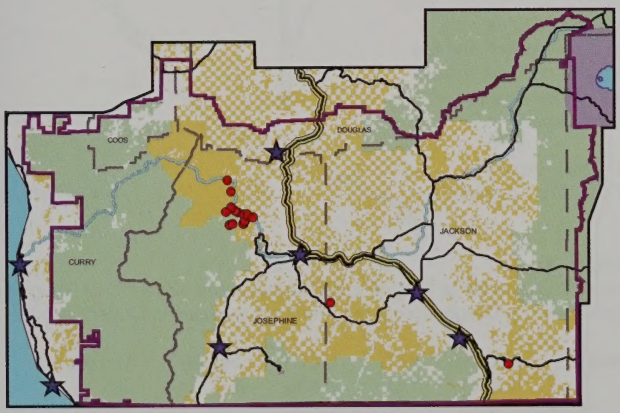
Habitat: Rocky walls and bluffs 500-1,500 ft. Also damp, somewhat shaded banks or slopes.

Distribution: Known only in and near Rogue Canyon near Galice, and recently from Slagel Creek near Provolt in Oregon, Jackson and Josephine Cos., and disjunctly in Siskiyou Co., California (along the Klamath River).

References:

Abrams	Eastman	Meinke
II-629	22	28

Illus: Meinke 29


COOS
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CURRY
JOSEPHINE

Code: ARSUH

Scientific Name: *Arabis suffrutescens* S.Wats.
var. *horizontalis* (Greene) Rollins

Family: Brassicaceae (mustard family)

Common Name: Crater Lake rockcress

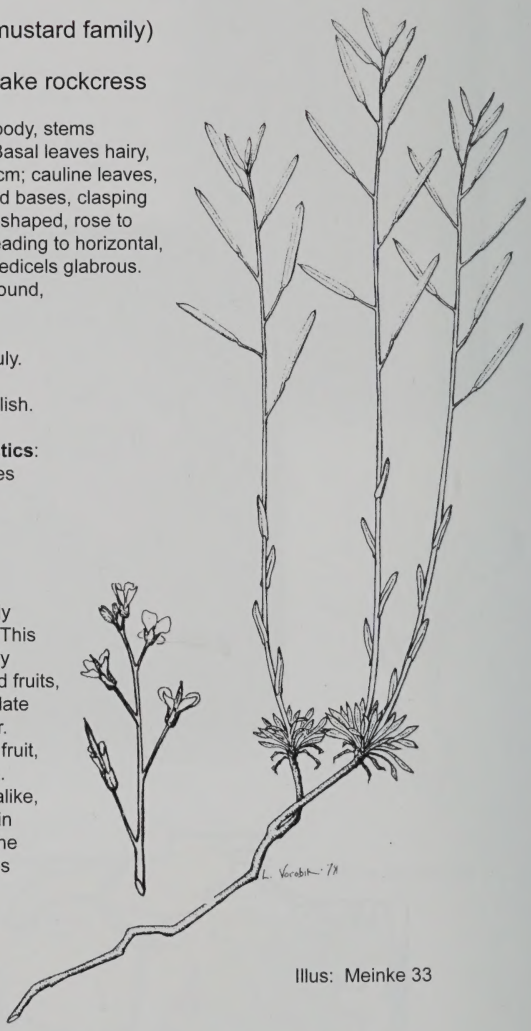
Plant Description: Base woody, stems 10-30 cm and hairy below. Basal leaves hairy, linear to spoon-shaped, 1-4 cm; cauline leaves, few, sessile, lanceolate, lobed bases, clasping stem, 1-3 cm. Petals spoon-shaped, rose to purplish, 5-7 mm. Fruit, spreading to horizontal, 2-3 cm long, 3-6 mm wide, pedicels glabrous. Seeds round with wing all around, 1 row per chamber.

Blooming Period: June - July.

Flower Color: Rose to purplish.

Distinguishing Characteristics: Lower stems and basal leaves hairy with unbranched hairs. Fruits/pedicels spreading.

Similar Species: *Arabis suffrutescens* var. *suffrutescens* is generally taller, with stems 20-50 cm. This variety is glabrous to sparsely hairy with pendent to reflexed fruits, 4-7 cm long, and has geniculate pedicels. *A. platysperma* var. *platysperma* has wide, erect fruit, and flowers are pink to white. *A. lemmonii* is another look-alike, but the seed and seed wing in this species is smaller, and the dendritic hairs of basal leaves and lower stems may be smaller and denser.



Illus: Meinke 33

Habitat: Open slopes above 7,000 ft. on pumice soils.

Distribution: Klamath Co. in western Cascades of Oregon and Cascades and North Coast Range of California. So far only known in Oregonfrom a few small occurrences in Crater Lake National Park.

References:	Abrams	H&C	HCOT	Jepson	Meinke
	II-311	153	II-456	403	32

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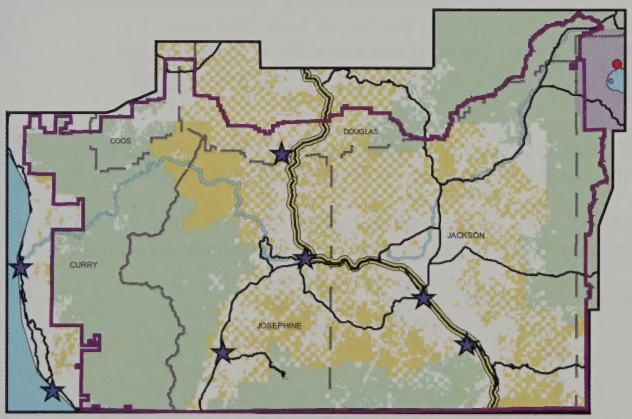
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JOSEPHINE

Code: ARHI5

Scientific Name: *Arctostaphylos hispidula* T.J. Howell

Family: Ericaceae (heath family)

Common Name: Hairy manzanita

Plant Description: Erect shrub 1-2 m high, highly branched. Leaves oblong-lanceolate to oblong-ovate, 1.5-3 cm long, 5-15 mm wide. Bracts 1-2 mm long. Pedicels very slender, 3-5 mm long, glabrous. Corolla about 5 mm long. Fruit 5-7 mm wide, cream to white-tan, often aging glaucous.

Blooming Period: March - April.

Flower Color: Pink (sometimes white).

Distinguishing Characteristics: Old stems very dark colored, young branches with very dense, glandular, short, stiff hairs. Leaves dark green, sandpapery to touch. Blossoms and leaves noticeably small compared to other local species. The inflorescence is distinctive in being branched and open, with large floral bracts. White fruit.

Similar Species: Several species of *Arctostaphylos* exist in southwest Oregon. *A. hispidula* is distinguished by its highly branched habit, rather narrow leaves, and extreme glandular pubescence of the new growth. *A. patula* is similar, but has longer bracts, and larger, smooth-feeling, bright green leaves. *A. nevadensis* also has bright green foliage, but has a more mat-like habit. *A. viscida*'s leaf surface is generally dull, white-glaucous and 2-4 cm wide, and fruits are red-brown. The following two species, *A. columbiana* and *A. canescens* are in Foliobracteata (versus Arctostaphylos) and have large leaf-like bracts, and sepals that are reflexed in fruit. *A. columbiana* has hair on most plant parts. The pedicels, ovaries, and fruit of *A. canescens* are all white-hairy (all glabrous in *A. hispidula*), and stems and leaves are also hairy to varying degrees.

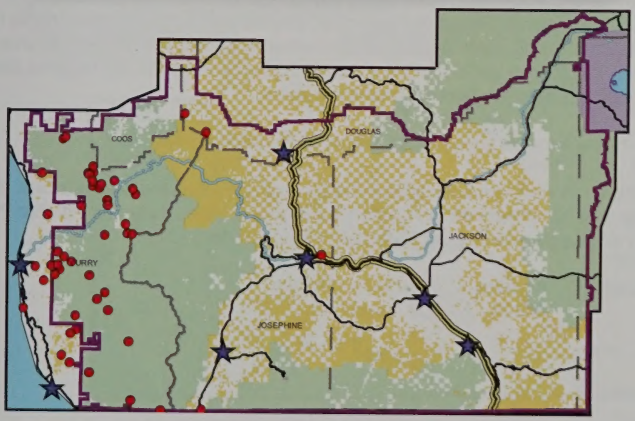
Illus: Meinke 35

Habitat: Dry rocky ridges and gravelly soils that receive direct sun. Shrub communities or sparse forest, often growing with *A. columbiana*.

Distribution: Curry, Douglas, and Josephine Cos. in Oregon, to northwestern California (Del Norte and Humboldt Cos., and two small populations in Sonoma Co.).

References:

Abrams	Jepson	Meinke
III-314	552	34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Code: ARVI6

Scientific Name: *Arnica viscosa* Gray

Family: Asteraceae (sunflower family)

Common Name: Shasta arnica

Plant Description: Plant 2-5 dm tall from woody, scaly caudex, densely stalked glandular stems, much branched. Leaves opposite, 2-6 cm long, 1-2 cm wide, sessile. Flower heads 10-20; involucre 8-15 mm, phyllaries stalked glandular and short hairy, disk flowers glandular. Fruit 5-6.5 mm, stalked-glandular, pappus short-barbed to subplumose.

Blooming Period: August.

Flower Color: Yellow to orange (bristles white or creamy).

Distinguishing Characteristics: Numerous freely branched stems clustered on a branching caudex. Herbage very hairy, the hairs of varying length. Leaves are sticky-glandular, and equally distributed along the stem (8-12 or more pairs of stem leaves); no separate basal leaves. Leaves opposite and numerous without petioles. Flower heads have only disk flowers; no ray flowers. Bracts, below flower heads, green with sticky hairs.

Illus: Abrams IV-427

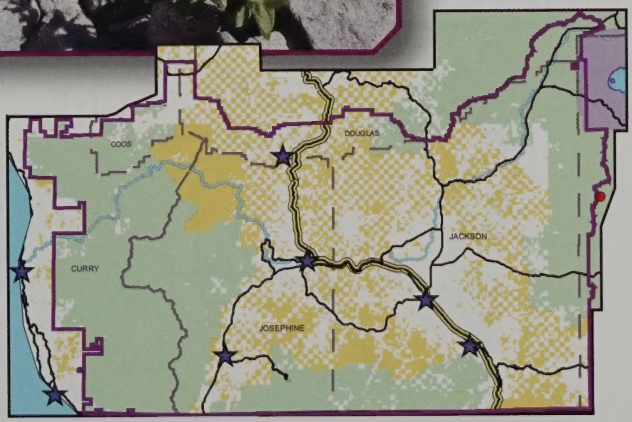
Similar Species: No other Arnicas have the above combination of features. The genus *Arnica* can be seperated from other genera of the Senecio tribe (Senecioneae) in our area by their opposite leaves. However, a number of species from other tribes in this family may resemble *A. viscosa* to some degree. When identifying this plant for the first time, it is best to use a key to tribes or genera of the Asteraceae family in one of our regional floras. *A. venosa* has toothed leaves with prominent veins.

Habitat: High elevation subalpine to alpine, open, talus slopes.

Distribution: In southern Cascades in Deschutes, Douglas and Klamath Cos., Oregon. Also present at Mt. Shasta and in California's Klamath Mtns., including Preston Peak in California and Applegate Ranger District on California land.

References:

Abrams	Jepson	Meinke
IV-426	202	38


COOS
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JOSEPHINE

Code: ASSE

Scientific Name: *Asplenium septentrionale* (L.) Hoffmann

Family: Aspleniaceae (spleenwort family)

Common Name: Grass-fern

Plant Description: Green clustered grass-like fronds, simple, generally 1-2 forked at tip, 5-15 cm. Petiole red-brown at base, dull green above, 2.5-12 cm. Blade narrowly linear, 1-2 mm. Sporangia in linear sori along veins, sori generally 1 per segment.

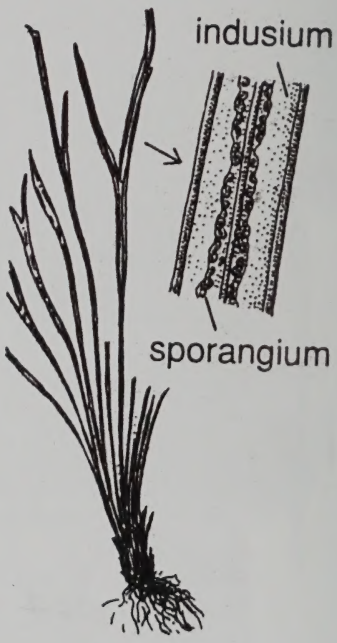
Flower Color: N/A

Distinguishing Characteristics: This fern resembles a bright green clump of grass. Fronds may be forked at the tip. Because this species looks like a grass, it may be easily overlooked.

Similar Species: This family, with only one genus, can be recognized by clathrate (lattice-like) stem scales and indusiate linear sori. *A. trichomanes* and *A. trichomanes-ramosum* have 1-pinnate leaflets; they clearly look like ferns, not a grass-fern.

Habitat: Shady to partly shady igneous rock outcrops in conifer forests.

Distribution: An uncommon, but wide-ranging fern. Found in Douglas, Jackson, and Klamath Cos. in the western Cascades of Oregon; Lassen, Tehama, Tulare, Shasta Cos. in California. In North America, this species is primarily found scattered in western mountains states with isolated populations in West Virginia.



Illus: Jepson 93

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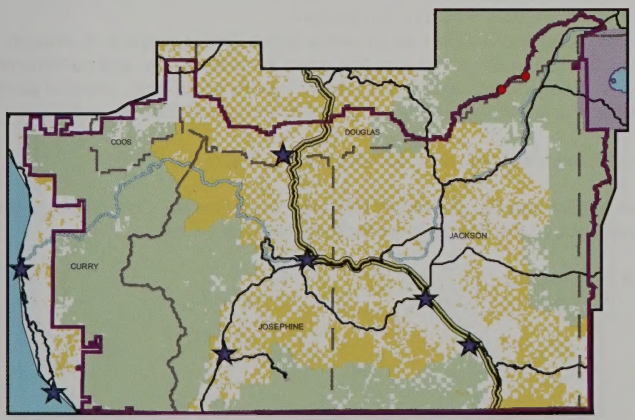
References:

Eastman	HCOT	Jepson
27	I-59	89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JOSEPHINE

Code: ASBR12

Scientific Name: *Aster breweri* (Gray) Semple
(***Chrysopsis breweri*** A. Gray)

Family: Asteraceae (aster family)

Common Name: Brewer's aster

Plant Description: Perennial, few to 20 stems from a woody caudex. Stems 10-90 cm, glandular to tomentose. Leaves, cauline, lanceolate to ovate, entire to toothed, glabrous to tomentose or glandular-hairy, 2-5 cm. Inflorescence a discoid cyme; phyllaries ± keeled, acute to acuminate, linear to narrowly lanceolate; base generally pale, midvein and tip green, can be tomentose to glandular-hairy.

Illus: Abrams IV-265

Blooming Period: June - July.

Flower Color: Yellow.

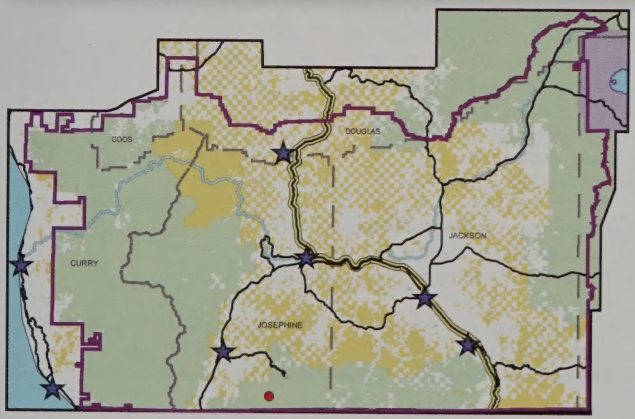
Distinguishing Characteristics: Look for a cyme of discoid flowers and keeled linear to lanceolate phyllaries, generally acuminate. The outer phyllaries are not conspicuously elongate.

Similar Species: *A. brickelloides* has linear-oblong to ovate or slightly obtuse phyllaries with tomentose hairs, ciliolate margins and no glandular hairs. Leaves may have an undersurface dense tomentose-canescent in Curry and western Josephine Cos. *Eucephalis vialis* has phyllaries with a similar shape to *A. breweri,* but with long attenuate outer bracts with fine glandular pubescence and no tomentose hairs. These species closely related and form apparent hybrids in our area, some of which are close in appearance to *A. breweri.* Other Asters in our region posess ray flowers.

Habitat: Subalpine meadows, open woods, above 4,500 ft.

Distribution: Josephine Co. in Oregon; California and Nevada. Collected by Peck in 1945 at Bolan Lake on the Rogue River-Siskiyou National Forest.

References: Jepson
206


COOS
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Code: ASVI4

Scientific Name: *Aster vialis* (Bradshaw) Blake
(***Eucephalus vialis*** Bradshaw)

Family: Asteraceae (sunflower family)

Common Name: Wayside aster

Plant Description: Perennial, 6-12 dm tall, from a stout base. The lowest leaves are small and scale-like. The largest leaves are in the middle, sessile, entire or with a few teeth, 5-9 cm long, 1.5-3 cm wide, glandular and dull beneath. Flower heads are several to many, in a leafy bracteate inflorescence, with no ray flowers; bracts are sharp-pointed and somewhat keeled, and the pappus has a few outer bristles.

Blooming Period: July - September.

Flower Color: Yellow.

Distinguishing Characteristics: Tall (6 dm and over); several flower heads, no ray flowers, involucre bracts tend to be keeled, elongate outer involucral bracts; glandular pubescent.

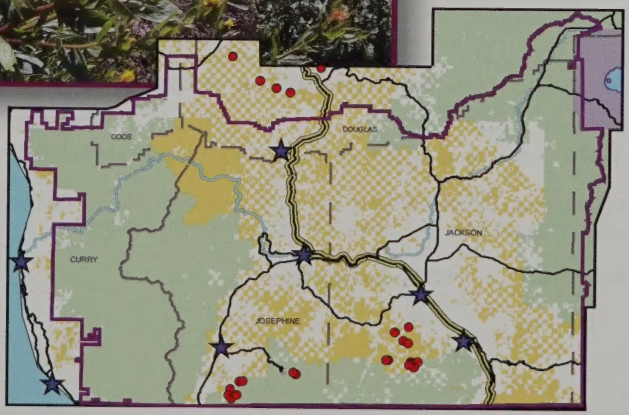
Similar Species: The *Eucephalus* species-complex can be variable with weak species distinctions. Most Asters in the area have ray flowers, except *Aster brickellioides* which also has pale leaves, but are dense tomentose beneath. *Aster oregonense* is very similar to *A. vialis*, but it has white flowers instead of yellow.

Habitat: Coniferous forest, usually on drier upland sites dominated by Douglas-fir and mixed hardwoods, serpentine hillslopes, and edges between meadows and forest, 500-5,100 ft. Occurs in various successional stages from clear-cuts to mature forest, and has recently been found thriving in burned areas.

Illus: Meinke 47

Distribution: Douglas, Jackson, Josephine, Lane and Linn Cos. Discovered on the Siskiyou N.F. (1998) in Del Norte Co. in California.

References:	Abrams	Eastman	H&C	HCOT	Meinke
	IV-324	28	491	IV-97	46


COOS
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JOSEPHINE

Code: ASCA7

Scientific Name: *Astragalus californicus* (Gray) Greene

Family: Fabaceae (legume family)

Common Name: California milk-vetch

Plant Description: Plant is robust, open and widely branched with grayish, wavy, or contorted hairs. Leaflets narrowly oblanceolate. Inflorescence with 10-30 flowers, flower banner recurved 45 degrees. Fruit 25-30 mm long, stalk-like fruit base > 2 mm, prominent sutures, and usually mottled purple.

Blooming Period: April - May.

Flower Color: Cream.

Distinguishing Characteristics: Stipules dimorphic – upper are free, the lower connate and forming a papery, fragile sheath around the stem. Fruit is linear to narrowly lanceolate, strongly compressed side to side, and 1-celled.

Illus: Abrams II-573

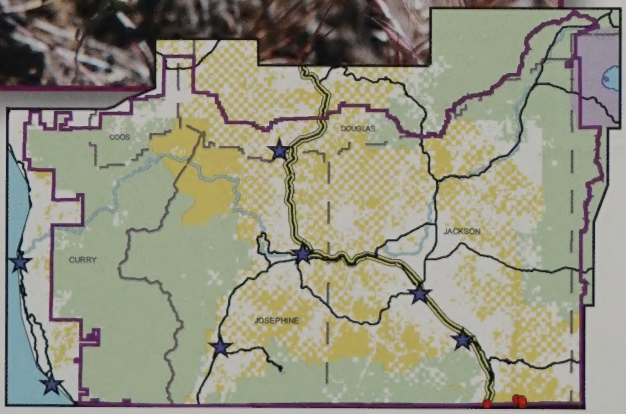
Similar Species: *Astragalus whitneyi* has cream to pinkish-purple petals with the banner recurved 50-75 degrees. Inflorescence with 3-16 flowers. Fruit is bladdery (15-60 mm long, 10-25 mm wide) and not compressed side to side. Leaflets oblong to obovate with straight hairs. Has a stipule – sheath similar to *A. californicus*. *A. accidens* var. *hendersonii* has a plump (16-25 mm long, 8-12 mm wide), fleshy, glabrous fruit that dries stiff-leathery. Also, hairs on foliage are curved, leaflets are oblong, stipules not forming a sheath, and inflorescence with 7-15 flowers. *A. purshii* is cespitose (often densely so) and has very fine, cottony, cobwebby, entangled hairs. Flower color is quite variable. Fruit is ovoid to widely lanceolate, with the surface obscured by dense hairs. In *A. umbraticus,* lower stipules do not form a sheath and the entire plant is generally glabrous. Petals are green-white, fruit is strongly curved, glabrous, and ages black.

Habitat: Dry, open areas in shrubland and woodlands, 900 to 4,000 ft.

Distribution: Cascade Mtns in Jackson Co., Oregon, near the Oregon/California state line and in Klamath Mtns and Cascade Range in northern California.

References:

Abrams	Jepson
II-573	591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CURRY
JOSEPHINE

Code: BAHOL2

Scientific Name: *Balsamorhiza hookeri* (Hook) Nutt. **var.** *lanata* Sharp

Family: Asteraceae (sunflower family)

Common Name: Woolly balsamroot

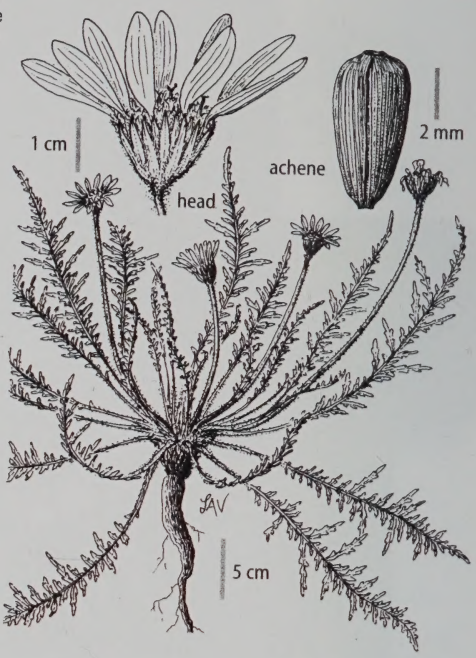
Plant Description: Stem 10-30 cm stem and leaves densely tomentose Leaf bipinnately lobed – the second divisions forming small, linear-oblong segments, 2-3 mm wide. Cauline leaves generally 2, near base, opposite. One flower head per stem. Outer phyllaries lanceolate, 11-17 mm, 2-4 mm wide, acute, tomentose. Ligules of ray flowers 2-2.5 mm; corollas of disk flowers 7-8 mm.

Blooming Period: April - June.

Flower Color: Yellow.

Distinguishing Characteristics: Showy yellow flower. Leaves mostly basal, deeply lobed, stem and leaves with long woolly hairs (hairs may disappear late in the season).

Similar Species: *B. sagittata*, *B. deltoidea*, and *B. careyana* have simple leaves. *B. sericea* has leaves once-pinnately divided (*B. hookeri* var. *lanata* leaves are 2x-pinnately divided), outer phyllaries ovate-lanceolate, generally wider at 7-8 mm, and herbage is finely strigose.



Illus: L. Vorobik

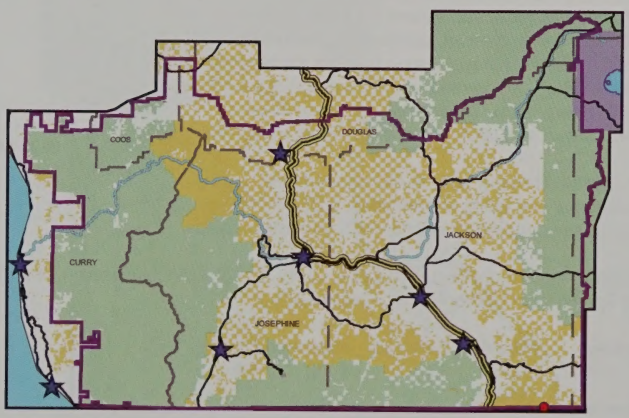
Habitat: Dry, open woodlands and grassy foothills on rocky soils at 3,000 to 5,000 ft.

Distribution: Klamath Mtns. of Jackson Co., Oregon; Cascade Range and eastern Klamath Mtns. in California.

References:

Abrams	H&C	HCOT	Jepson
IV-108	496	I-103	213

[...sp. only....]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Code: BEOR

Scientific Name: *Bensoniella oregana* (Abrams and Bacig.) Morton

Family: Saxifragaceae (saxifrage family)

Common Name: Bensonia, bensoniella

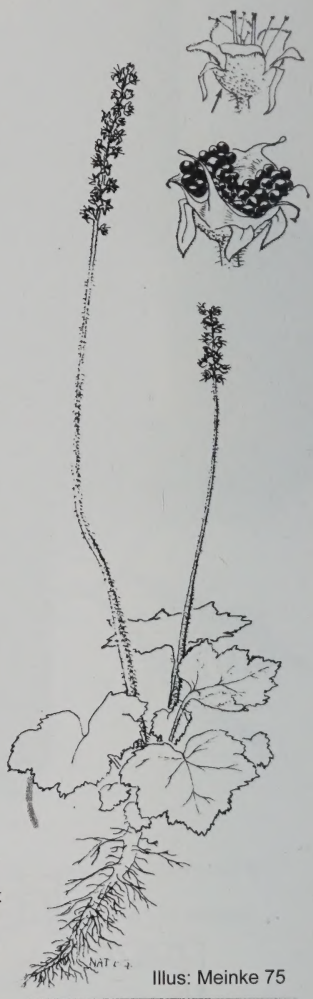
Plant Description: Perennial herb with flowering stems 2-4 dm high, carrying a raceme of 15-20 flowers. Leaves arising mostly basal, 3-7 cm long and 5-7 (9) lobed (often 1/2 way to midvein). Sepals and petals 2-3 mm long.

Blooming Period: June - August.

Flower Color: Creamy white.

Distinguishing Characteristics: In flower, anthers 2 mm broad, salmon colored. In fruit, open, cup-shaped capsule with numerous exposed ovules or shiny black seeds and the styles protruding from the sides of the capsule. Leaf broadly ovate, divided sometimes halfway to midvein into 5-7 lobes (especially pronounced in younger leaves). Young leaves pleated upward. Upper leaf surface mostly glabrous; lower with shaggy hairs along the veins. Petiole hairs long, soft, white when young but aging to brownish. Petiole light green.

Similar Species: *Bensoniella oregana* differs from other genera of Saxifragaceae by having 5 stamens, a superior ovary, and linear, thread-like petals. *Saxifraga, Tellima,* and *Tiarella* species have 10 stamens and different petals. *Mitella ovalis,* the species most likely to be confused with *B. oregana,* has leaves less lobed, not pleated upward when young, and a deeper green. Petiole hairs long and shaggy, but not as soft, and petiole distinctly brownish. *M. trifida* has petioles glabrous or with occasional sparse hairs and leaves not as deeply lobed. *M. petrandra*, *breweri*, *caulescens*, and *diversiloba* generally have glabrous petioles (or at least not densely hairy). *M. petrandra* and *caulescens* have leaves with sharp teeth. *M. diversiloba* leaves have no teeth. *M. breweri* and *trifida* have shallow leaf lobes.

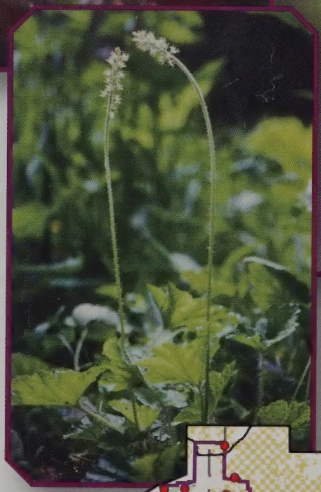


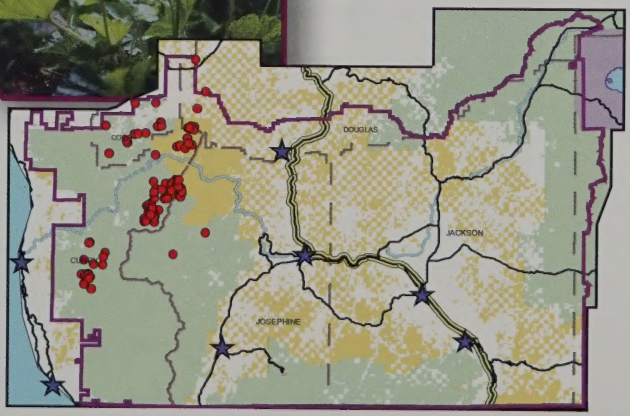
Illus: Meinke 75

Habitat: Relatively deep soils in moist meadows, forest openings, and along streamsides, 3,000-5,000 ft. Upper slope sites and ridge saddles with northerly aspects.

Distribution: In Oregon, occurs in Coos, Curry, Douglas and Josephine Cos. Two disjunct sites are known from Humboldt Co., California.

References:	Abrams	Eastman	Jepson	Meinke
	II-374	33	1002	74




DOUGLAS
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Code: BOCR

Scientific Name: *Botrychium crenulatum* W.H. Wagner

Family: Ophioglossaceae (adder's-tongue family)

Common Name: Crenulate grape-fern, scalloped moonwort

Plant Description: Sterile leaf stalk less than 7 cm long, blades are generally less than 6 cm and less than 2 cm wide. Fertile parts 1.3 to 3 times the size of the sterile stalk.

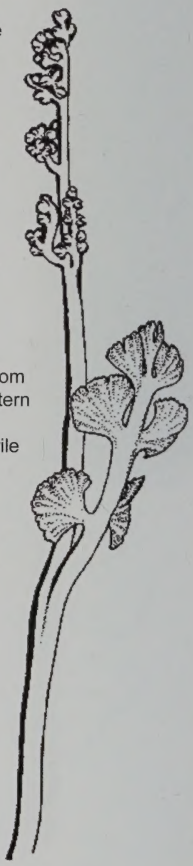
Distinguishing Characteristics: Only well-developed plants are readily identifiable. Careful observation in the field is needed to distinguish between juveniles and mature plants and to check if more than one species exists at the site. Sterile leaf blade only once pinnate and attached well above ground level, above mid-leaf. Pairs of segments 2-3, rarely more, widely spaced, segments at blade tip few, not overlapping, and few branches on the sporophore, with the lowest branch long.

Similar Species: *B. multifidum* is the only common *Botrychium* in our area. It is a large species with sterile leaf blades longer than 10 cm and 2-4 times pinnate, the segments progressively reduced from base to tip. *B. simplex* also known from a few locations in southwestern Oregon; it is small, rarely larger than 7 cm, and has the sterile leaf blade attached at or below ground level. It has ternately divided sterile leaf segments or lower pinnae often once again divided. Also, the lower most segments enlarged and well separated from the rest of the blade. *B. lunaria* and *B. minganense* (western form) are similar, but in Oregon only known from the Wallowa, Blue, and Ochoco Mountains and Northern Cascades (see Wagner 1992 for distinguishing characteristics). The range and abundance of most *Botrychium* species are little known.

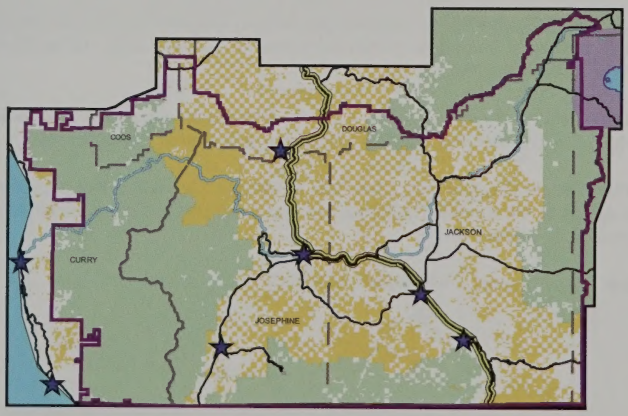
Habitat: Moist grassy places on the margins of wetlands, higher elevations.

Distribution: Throughout Oregon; Jackson Co., and possibly Douglas Co. in southwestern Oregon. Also known from Califnornia, Washington, and Utah.

References: Jepson
99



Illus: D. Wagner


COOS
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JOSEPHINE

Code: BOPU2

Scientific Name: *Botrychium pumicola* Coville ex. Underwood

Family: Ophioglossaceae (adder's-tongue family)

Common Name: Pumice grape-fern

Plant Description: Stem stout, grayish-green. Sterile leaf blades (tropophore) less than 5 cm long, 1-3 cm wide, ternately divided. Fertile frond (sporophore) 1-1.5 times the size of sterile frond, pinnately divided. Both fertile and sterile structures are joined at ground level, sharing a stipe that extends below ground. As the sporophore matures the spore cases begin to resemble grapes, while the tropophore begins to fade to a yellowish-brown – the color of pumice. Base of plant covered with reddish former shoots.

Illus: Abrams I-3

Fertile Frond: June - September. The emergent fern may appear as early as April in montane sites. Some anecdotal observations correlate heavy rainfall with emergence. At higher elevations, plants generally emerge in July.

Distinguishing Characteristics: This is the only known *Botrychium* that grows in high-elevation pumice. Look for a small dull grayish-green, nearly invisible, glaucous fern with a sessile, ternately divided sterile frond. The cuneate, leathery pinnae overlap. The fertile frond arises high on a common stalk.

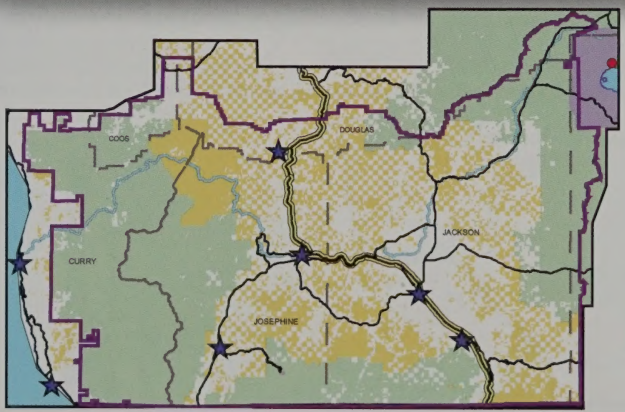
Similar Species: Blades of *B. simplex* are green, not glaucous, and the pinnae are fan-shaped and papery. The sterile fronds are borne on a petiole while the fertile frond arises at or just above the leaf sheath.

Habitat: On alpine pumice fields above 7,200 ft. Also found in montane lodgepole pine forest openings, and within frost pockets on pumice soil, east of the Cascades.

Distribution: Deschutes, Klamath, Lake Cos. in Oregon Cascades. Range formerly thought to extend to Mt. Shasta, California, but that collection has been identified as another species, *B. pinnatum*.

References:

Abrams	Meinke
I-3	76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JOSEPHINE

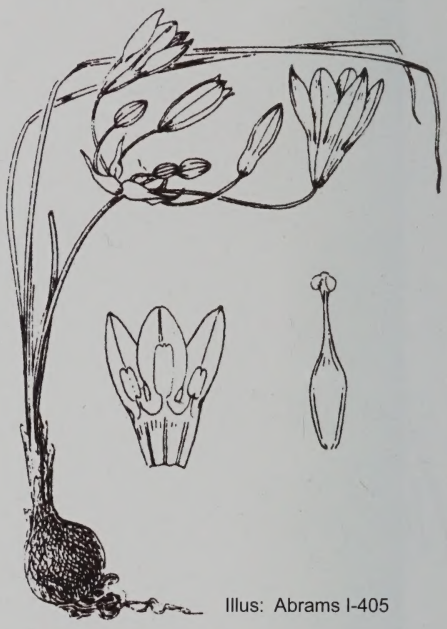
Code: BRTE4

Scientific Name: *Brodiaea terrestris* Kellogg

Family: Lilliaceae (lily family)

Common Name: Dwarf brodiaea

Plant Description: Perenial from fibrous corm. Stem 2-6 cm long, scarcely rising above the ground or entirely underground. Leaves basal, 1-2, linear-lanceolate, keeled, withered in flower. Inflorescence axis 0.5-20 cm, pedicels 1-15 cm. Flower tube 6-13 mm long, narrowly bell-shaped, lobes ascending 10-20 mm, tips recurved. Three fertile stamen and three non-fertile (staminiodia), white to violet, 4-5 mm.



Illus: Abrams I-405

Blooming Period: April - July.

Flower Color: Blue - violet.

Distinguishing Characteristics: A blue-violet brodiaea with ascending lobes and staminodes that lean slightly towards the stamens, but are not inrolled.

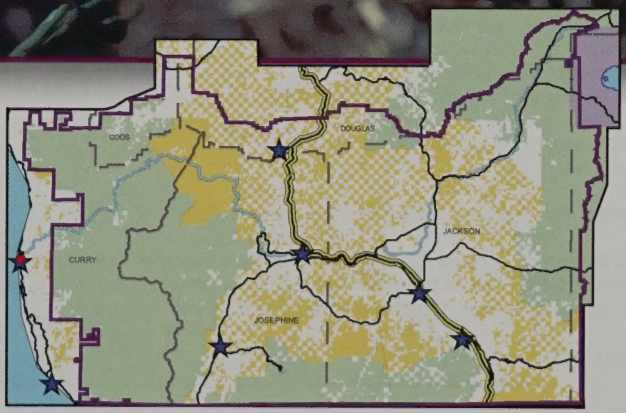
Similar Species: Staminoides of *B. elegans* stand away from the stamens and the perianth tube is funnel-shaped, not bell-shaped. *B. coronaria* has strongly inrolled staminodes and flowers 24-38 mm long, while in *B. terrestris* the stamens are little inrolled and flowers are 14-24 mm long. *Triteleia bridgesii* and *T. laxa* also occur near the coast and have bluish flowers, but both have 6 stamens.

Habitat: Stabilized sand dunes, grasslands and open woodlands.

Distribution: Coos and Curry Cos. in Oregon, and the central coast in California. Found in a narrow coastal band in Oregon (below 300 ft.), but many collections are historical.

References:

Abrams	Jepson
I-405	1183


COOS
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Code: BUCA2

Scientific Name: *Bulbostylis capillaris* **(L.)** Kunth ex C.B. Clarke

Family: Cyperaceae (sedge family)

Common Name: Densetuft hairsedge

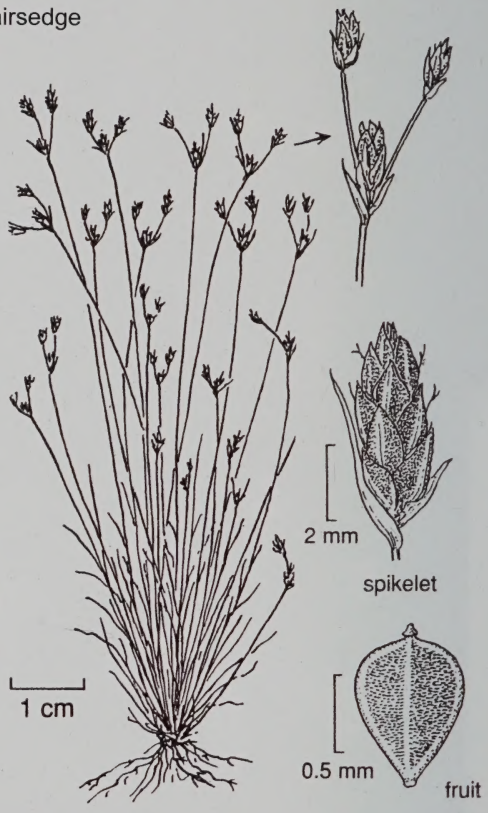
Plant Description: Small, tufted annual less than 30 cm. Filiform leaves and a few spikelets with spirally arranged bracts. Stem slender, round, ridged. Leaf basal, sheath margin wide, tan, blade < 0.5 mm wide. Spikelets generally long peduncled, fusiform; flower bracts spiraled, in fruit dark reddish brown, mid-rib prominent, greenish. Flowers bisexual, stamens 3, style 3-branched, widest at base, base bulb-tipped. Fruit 1 mm, 3-sided, angles ridged, achemes with a minute tubercle mostly round and pale brown.

Blooming Period:
June- August.

Flower Color: Flower bracts dark reddish brown with a greenish midrib.

Distinguishing Characteristics: A bisexual sedge-like plant with a unique 3-sided fruit with a tubercle at the top, but without perigynia or perianth bristles.

Similar Species: Superficially, resembles a soft, open, cespitose *Carex*, but (like *Scirpus*) no perigynia enclose the flowers or fruits. Unlike *Scirpus*, the style is widest at the base, thus fruits are tubercled at the top. Superficially resembles several annual *Juncus* species in our area.



Illus: Jepson 1123

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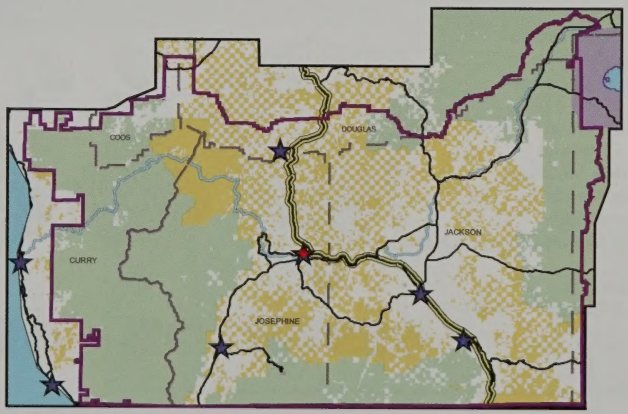
Habitat: Meadows and grassy clearings above 3,000 ft.

Distribution: Josephine Co. in Oregon (historical specimen collected in Oregon by Thomas Howell in 1887). Also in the Sierra Nevada of California, the Southwest, the Midwest to eastern North America, Central America, East Asia, and Oceania.

References:

H&C	HCOT	Jepson
576	I-219	1107


COOS
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JOSEPHINE

Code: CACO41

Scientific Name: *Calochortus coxii* M. Godfrey & F. Callahan

Family: Liliaceae (lily family)

Common Name: Cox's mariposa-lily

Illus: F. Callahan

Plant Description: Single leaf, 30 cm long, densely hairy inner surface, outer glabrous, shiny, dark green. Sepals acuminate, ±20 mm long, petals broadly obovate, whitish with reddish striations from base to a deeply impressed gland with protruding base; yellow hairs above gland grade to white at tips, above gland broad lavender chevron extending to petal edges. Petal edges fringed and hairy. Fruit 3-winged, nodding; capsules ripe late July.

Blooming Period: Late June to early July.

Flower Color: Cream.

Distinguishing Characteristics: Deeply bent, cream to whitish colored petals. Yellow hairs above gland that fade to white at petal margins. Lavender "chevron" mark present above gland. Red-pink striations lead from base of petal to gland. Leaves with parallel rows of hairs on undersides.

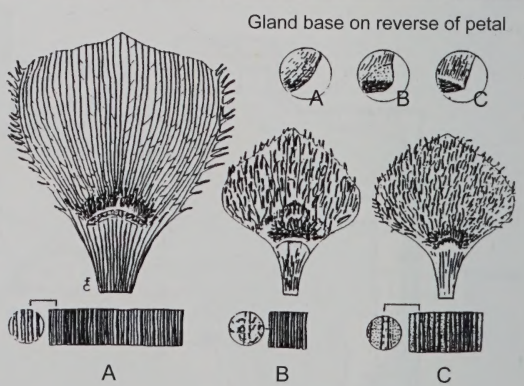
Similar Species: *C. persistens* also has creamy petals with yellow hairs above glands and nodding fruits, but is a more robust flower with obvious fringed side margins. It also differs in having a persistent perianth when the fruit matures. The common *C. tolmei* has a dense fuzz of purple to pink hairs above the gland and pink to purple striations; the leaf is glaucous, not hairy. At similar elevations it blooms earlier, from March to early May. *C. howellii* lacks a purple basal spot and has a smaller erect fruit. *C. umpquaensis*, a recently described species, has a less impressed gland and a band of branched white hairs above the gland. *C. coxii*, *C. howellii*, and *C. umpquaensis* all have parallel rows of hairs on the leaf undersides and are serpentine endemics. *C. nitidus* has erect fruits and lavender to cream petals.

Habitat: Ultramafic soils, shady moist sites, often north-facing; in the ecotone between coniferous forests and grass-shrub meadows or in meadows, commonly in litter and moss microsites, below 2,500 ft.

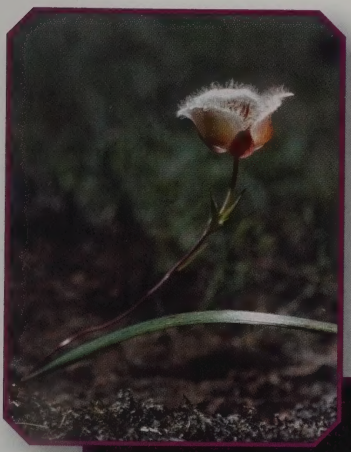
Distribution: Klamath Mtns., Douglas Co. in Oregon. On ultramafic soil in the Riddle and Canyonville region in a 150 ft. long band between the Umpqua River and Myrtle Creek Mountain. This Oregon endemic was discovered in 1988 by Marvin Cox.

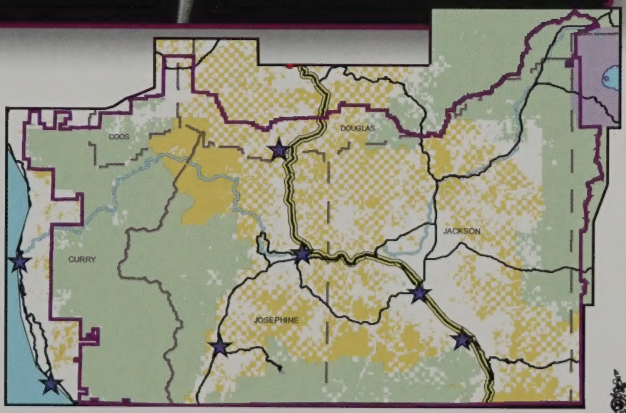
References:
Godfrey & Callahan (1988)

A Comparison of *C. persistens* (A), *C. coxii* (B), and *C. tolmeii* (C) Petals



Illus: F. Callahan

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Code: CAGR

Scientific Name: *Calochortus greenei* S. Wats.

Family: Liliaceae (lily family)

Common Name: Greene's mariposa-lily

Plant Description: Stem stout, usually branched, 10-30 cm high. Single basal leaf about 20 cm, 1-2 cauline leaves. Flowers 1-5, erect. Sepals are 2.5-3 cm, petals are 3-4 cm, purplish, barred with yellow below on the outside. Inside petal sparse, villous, with white hairs changing to yellow below; gland deeply depressed and bordered below by wide, ciliate membranes and by short white hairs above. A purple crescent lies outside the petal, above the gland area. Gland surface hairless. Fruit is erect and winged.

Blooming Period: June - July.

Flower Color: Lavender to purplish.

Distinguishing Characteristics: Single basal leaf and a purple crescent lies outside of the petal, above the gland area.

Similar Species: Similar to *C. persistens, C. longebarbatus, and C. nudus. C. persistens* has 1 to 2 flowers on a stem, flowers 5-7.5 cm long and the basal leaf exceeds the flowering stem. *C. longebarbatus* and *C. nudus* have smaller flowers. Refer to Kozloff's *Plants of Western Oregon, Washington, and British Columbia* for additional keys to *Calochortus.*

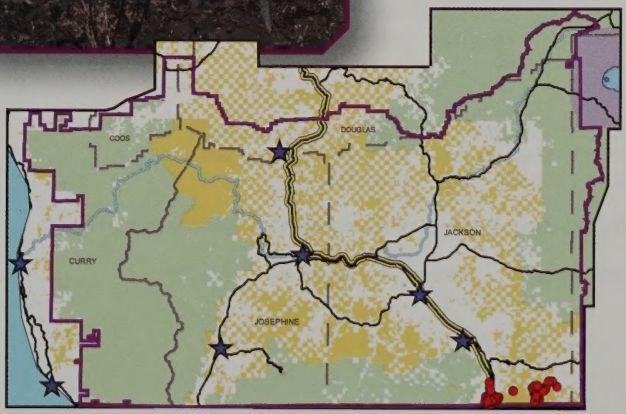
Habitat: Inhabits clay soils of chapparral areas, around dry thickets and on rocky slopes and bluffs. Also margins of white oak stands and white fir stands, 2,400 to 6,500 ft.

Distribution: Cascade Mtns. in Jackson and Klamath Cos., Oregon. Also in Modoc, Siskiyou, and Shasta Cos in California.

Illus: Meinke 79

References:

Abrams	Eastman	Jepson	Meinke
I-438	45	1186	79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Code: CAHO11

Scientific Name: *Calochortus howellii* S. Wats.

Family: Liliaceae (lily family)

Common Name: Howell's mariposa-lily

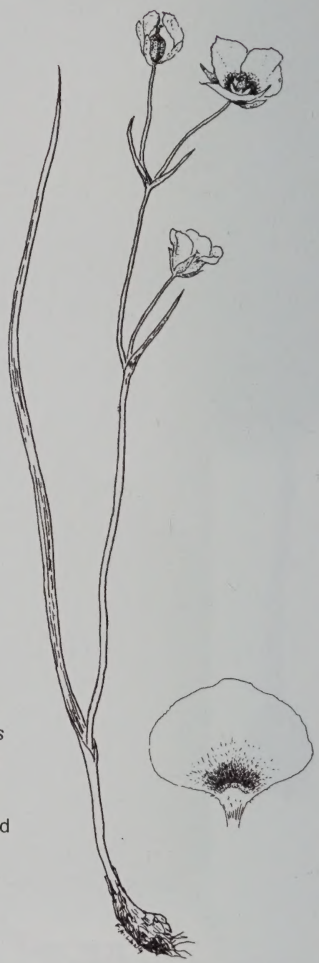
Plant Description: Erect stem 2-5 dm high. Leaf solitary, sometimes surpassing the inflorescence in length, slightly wooly with parallel rows of hairs underneath, 1.5-5 mm wide and about 2-4 dm long. Flowers usually 1-4; bracts 2, 1-3 cm long. Petals 2-3 cm long, broadly oval shaped, hairy on upper surface. Capsule 18-20 mm long, erect in old age. Stem not producing basal bulbets.

Blooming Period: May - July.

Flower Color: White, drying to cream or yellowish-white, and greenish-tinged at the base.

Distinguishing Characteristics: Sepals have thin non-green margins. Inside of petal with short, sparse whitish hairs on upper and purple hairs on lower portion. Tissue around the gland is green (some note yellow). Anthers oblong, apiculate.

Similar Species: *Calochortus uniflorus*, *C. tolmiei*, and *C. elegans* known from Josephine Co. *C. tolmiei*, the only species which grows with *C. howellii*, is a smaller plant characterized by densely hairy petals with pointed tips and hairy pendent capsule pods. Closely related *C. elegans* resembles *C. tolmiei*, but is smaller, rarely branched, and grows at higher elevations. *C. uniflorus* is short (2-5 cm), has lavender flowers with a few long soft hairs above the gland, pendent fruit, and leaves have a glaucous upper surface. It may grow in sites near *C. howellii,* but in areas with wetter, poorly drained soils. Refer to Kozloff's Plants of Western Oregon, Washington, and British Columbia for additional keys to *Calochortus*.



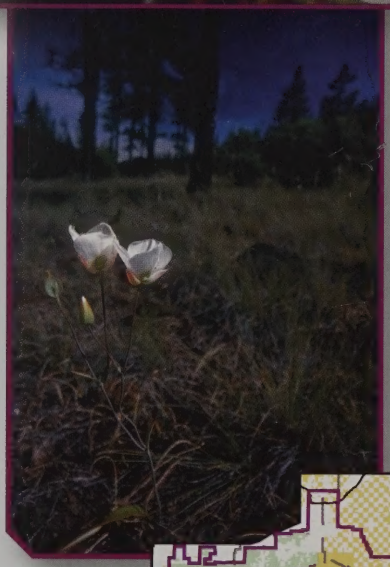
Illus: Meinke 81

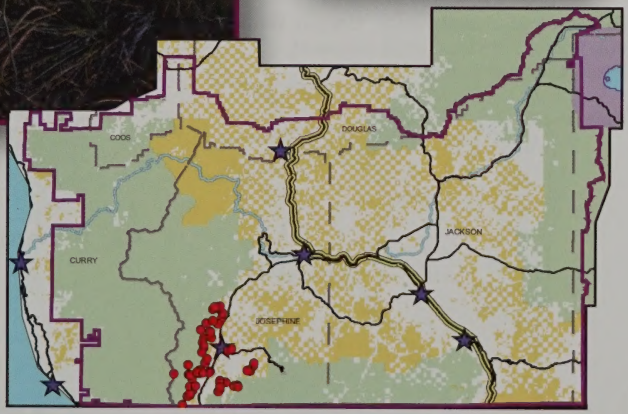
Habitat: Serpentine soil, dry rocky slopes. Low to middle elevations, often on *Ceanothus* brush-covered slopes or in open Jeffrey pine stands.

Distribution: Endemic to the Illinois Valley, Josephine Co., Oregon.

References:

Abrams	Eastman	Meinke
I-439	35	80

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Code: CAIN18

Scientific Name: *Calochortus indecorus* Ownbey & M.E. Peck

Family: Liliaceae (lily family)

Common Name: Sexton Mt. mariposa-lily

Plant Description: Bulb ovoid, with thick, dark coat, 2-2.5 cm long; stem stout, not bulbiferous, 8-12 cm; basal leaf 20-25 cm long, single cauline leaf closely subtending inflorescence. Umbels commonly 2 or 3 flowers, with occasionally a third umbel on slender stalk from basal leaf; sepals broadly lanceolate, somewhat shorter than petals and without distinctive coloring; petals without hairs except for a small area above the gland. Capsule ovoid, 1.5-2 cm long, narrowly three winged, nodding.

Blooming Period: May.

Flower Color: Lavender.

Distinguishing Characteristics: Large basal leaf, umbels 2-3 flowered, with occasional third umbel. Petals without hair except for a small area above the gland.

Similar Species: Closely related to *C. uniflorus,* but differs in the absence of basal bulbets and the much greater length of the stem, which is moderately stout and usually erect. *C. persistens* is also lavender, but plant is much smaller at 5 to 7.5 cm. *C. umbellatus*, most commonly found in California, also highly resembles *C. indecorus*.

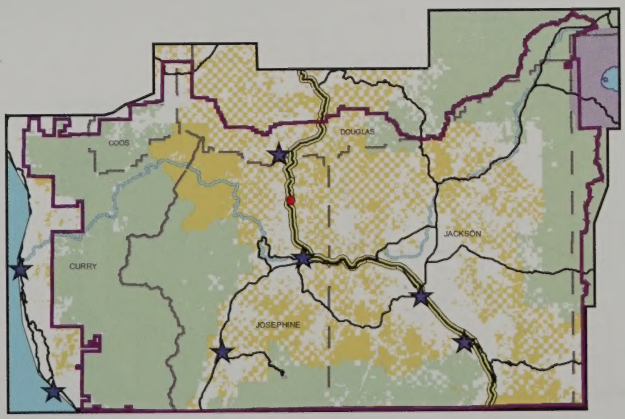
Habitat: Probably moist, rocky serpentine slopes and flats.

Distribution: Josephine Co., Oregon, known only from a 1948 Mt. Sexton collection. Presumed to be extinct.

References: Meinke 83

Illus: Meinke 83

No Photo ~ Species may be extinct.



Code: CAMO3

Scientific Name: *Calochortus monophyllus* (Lindl.) Lem.

Family: Liliaceae (lily family)

Common Name: One-leaved calochortus

Plant Description: Stem flexous, 8 to 20 cm; basal leaves 10-30 cm, cauline 0-3. Flowers 1 to 6, erect, bell-shaped. Yellow petals are densely yellow-hairy, surface of the gland naked. Sepals and petals about equal, 16-20 mm. Fruit capsules nodding, 12-20 mm, broadly winged.

Blooming Period: April - May.

Flower Color: Yellow, often red-brown spotted above the base.

Distinguishing Characteristics: Petals deep yellow and hairy inside, bell-shaped. Fruit nodding.

Similar Species: Other species in our area may have some yellow in their flowers, but not as their base color.

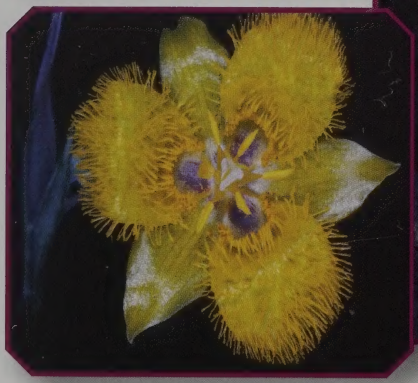
Habitat: Wooded slopes, clay-loam soils, 1,200 to 3,600 ft.

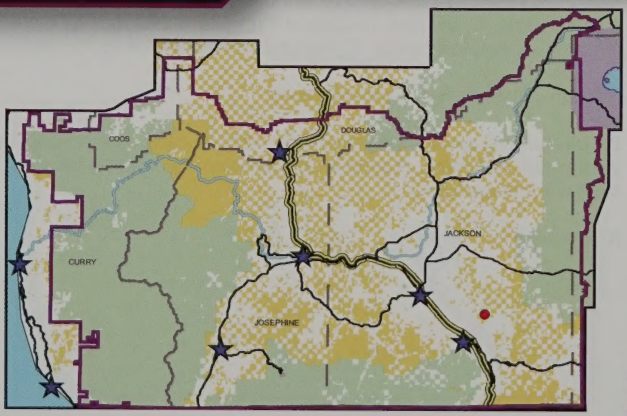
Illus: Abrams I-433

Distribution: In Oregon, Jackson (Grizzley Peak and Sam's Valley) and Klamath Cos.; western slopes of the Sierra Nevada from Butte to Mariposa Cos. in California.

References:

Abrams	Jepson
I-433	1186

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Code: CANI

Scientific Name: *Calochortus nitidus* Dougl.

Family: Liliaceae (lily family)

Common Name: Broad-fruit mariposa-lily

Plant Description: Stem erect, 30-50 cm, not producing basal bulblets. Basal leaf blade flat, becoming involute, 10-30 cm; cauline leaves halfway up stem. Sepals purple-tinged, smaller than petals, glabrous, 2-3 cm; petals 30-35 mm long, lilac to nearly white with central purple-blue crescent on inside above gland. Small round nectary covered with long-villous yellow hairs, glands ± triangular-lunate, slightly depressed, bordered by narrow, deeply fringed membrane, hairs and membrane fringe densely covered with long papillae. Filaments widened below. Fruit erect, 3-winged, ellipsoid to nearly globular.

Illus: Abrams I-438

Blooming Period: June - July.

Flower Color: White to lilac to deep lavender.

Distinguishing Characteristics:
A hairy lavender petal with a purple crescent on the inside, yellow hairs on the nectary, erect orbicular fruit, and a single, broad, flat basal leaf that is blue-green in color. Only tetraploid member of the genus known in the Pacific Northwest.

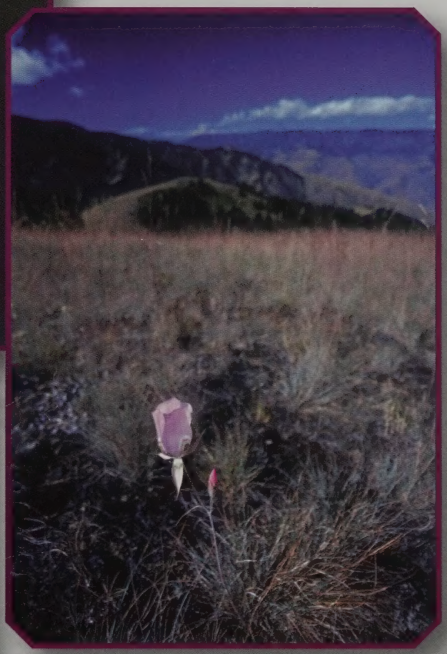
Similar Species: Other local lavender *Calochortus* species either have a purple crescent on the outside (*C. greenei*), nodding fruit (*C. persistens*), or bear bulblets near the base of the stem (*C. longebarbatus). C. nudus* lacks darker blotches on the petals.

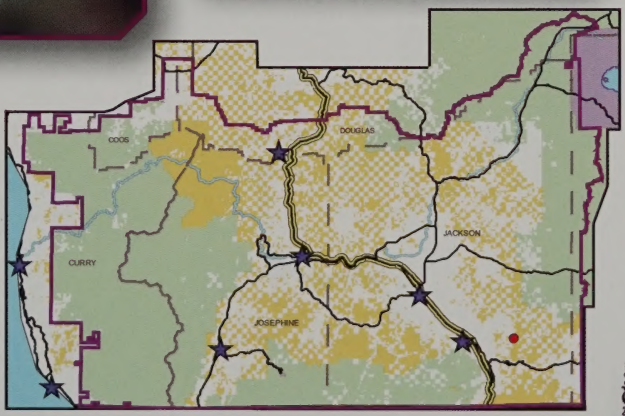
Habitat: Grassy hillsides and meadows.

Distribution: Cascade Range and Blue Mtns. in Jackson and Wallowa Cos., Oregon; also Washington and Idaho. A small local population was recently found in Jackson Co. in the Greensprings area.

References:

Abrams	H&C	HCOT
I-438	687	I-773

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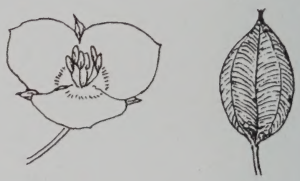
Code: CANU2

Scientific Name: *Calochortus nudus* S. Wats.
(***Calochortus nutudus***)

Family: Liliaceae (lily family)

Common Name: Shasta star-tulip

Plant Description: Stem 10-25 cm. Leaves basal only, persistent, tapering at base, flat, glabrous adaxially, 5-15 cm. Perianth bell-shaped, erect, sepals 16-20 mm; petals 14-16 mm, pink to lavender, adaxial surface ± glabrous, nectary shallow, no obvious spotting or stripes, bordered below by a wide ciliate membrane. Fruit erect, winged, 15-20 mm.



Illus: Abrams I-436

Blooming Period: May - July.

Flower Color: Pink to lavender.

Distinguishing Characteristics: Fruit erect, flower ± glabrous pink to lavender without obvious spots or stripes. Basal leaves persistent when flowering and plant lacks cauline leaves.

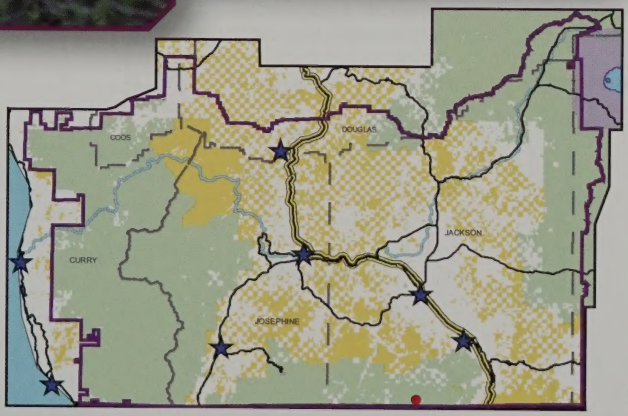
Similar Species: *C. uniflorus* is similar, but has nodding fruits and cauline leaves. *C. greenei* grows in dry places below 3,300 ft, the larger petals (30-40 mm) have a dark purple crescent on the outside and the nectaries are deep. *C. longebarbatus* and *C. nitidus* both have a purple crescent inside the petal, above the nectary. *C. persistens* has petals greater than 30 mm, yellow near base, and nodding fruit. The flower of the common *C. tolmiei* is densely hairy inside. In the High Sierra Nevada, hybrids occur with *C. minimus*.

Habitat: Moist, grassy areas, lake and bog margins above 3,400 ft.

Distribution: Klamath Mtns. in Jackson Co., Oregon; also Siskiyou to El Dorado Cos. in California.

References:

Abrams	Jepson
I-436	1186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Code: CAPE

Scientific Name: *Calochortus persistens* Ownbey

Family: Liliaceae (lily family)

Common Name: Siskiyou mariposa-lily

Plant Description: Perennial from bulb, flowering stem 10 cm long, with one longer (single) bract-like basal leaf at 20 cm. The 1-2 flowers are erect, lavender, yellow at the base, with yellow hairs along the margins; 2 bracts 2-3 cm long. Petals and sepals 35-40 mm long; anthers 10 mm long. Seed capsule is winged.

Blooming Period: June - July.

Flower Color: Lavender (pink-purplish), yellowish at base.

Distinguishing Characteristics: Bell-shaped flowers with three large petals (35-40 mm), sparsely yellow-haired above the nectary, no spots or distinct banding present. Flowering stem approximately 10 cm tall, capsules nodding.

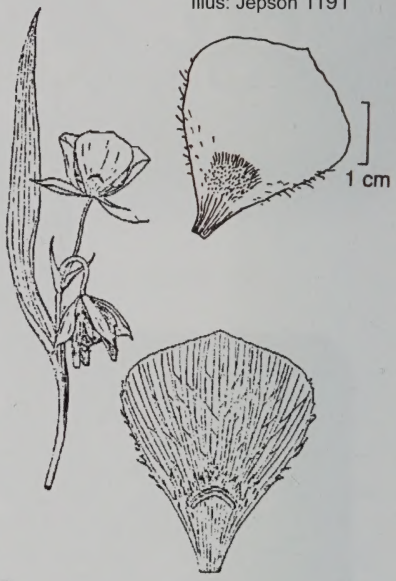
Similar Species: *C. greenei* has 1-5 flowers, with purple marking on the outside of petal, and often grows taller (10-30 cm). It also has erect capsules. *C. nudus* has flowers only 14-16 mm long, and is found in moist, grassy meadows and wetland margins.

Habitat: Open, rocky areas above 3,000 ft.

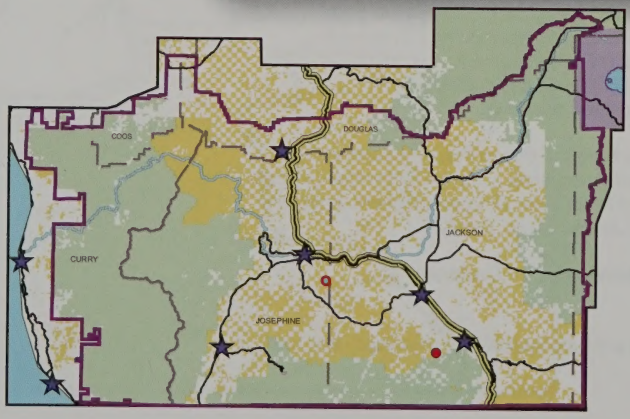
Distribution: Eastern Klamath Mtns. in Jackson Co., Oregon and Siskiyou Co., California.

References: Jepson
1188

Illus: Jepson 1191



Illus: M. Ownbey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Code: CAUM5

Scientific Name: *Calochortus umpquaensis* N.A. Fredricks

Family: Liliaceae (lily family)

Common Name: Umpqua mariposa-lily

Plant Description: Perennial, bulb ovoid with membranaceous coat. Stem erect, 2-3 dm long, glabrous or glaucous. One solitary basal leaf, base clasping, hairs on underside; stem leaf one. Bracts two, subopposite. Petals 2.5-4.6 cm long. Base of white petal (gland) is green, sometimes with purple striations, with a band of branched, white hairs above. Purple petal spot located above gland. Capsules are pendent, and 3-5.4 cm long at maturity.

Blooming Period: May - July.

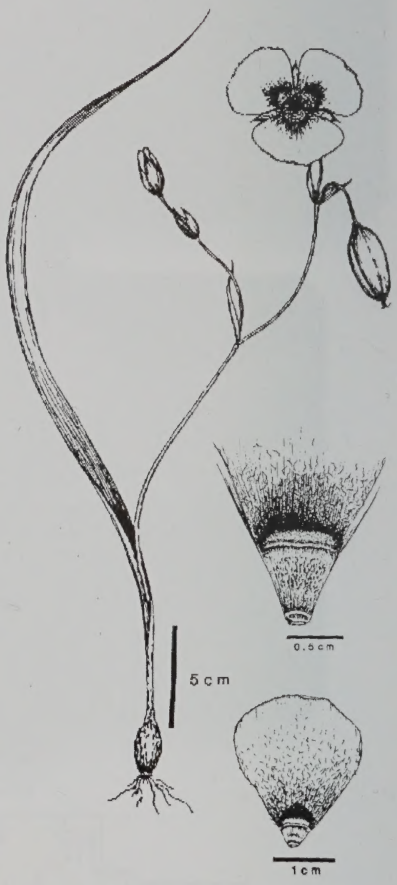
Flower Color: White with purple patch.

Distinguishing Characteristics: Flower markings and pendent capsules. Also parallel rows of hairs along the underside of leaves (but also occurs in *C. howellii* and *C. coxii*).

Similar Species: *Calochortus tolmiei* has glaucous, hairless leaves, and smaller, cup-shaped flowers. In flower, *C. howellii* does not have the purple basal spot and the presence of purple hairs above the gland and has relatively small erect capsules. *C. coxii* has erect flower petals with pink striations at their bases and a dense yellow pubescence above the gland.

Habitat: Restricted to serpentine soils; seems to favor ecotone habitat between meadow and forest. Also occurs in closed-canopy forest and open grass-forb meadows.

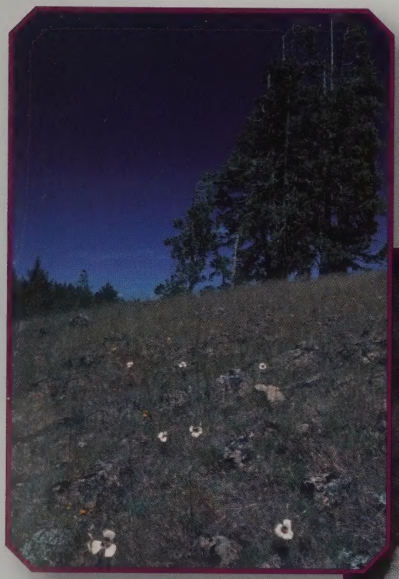
Distribution: Found in widely scattered populations along a narrow serpentine geologic band in southern Douglas, northern Josephine and Jackson Cos., Oregon.

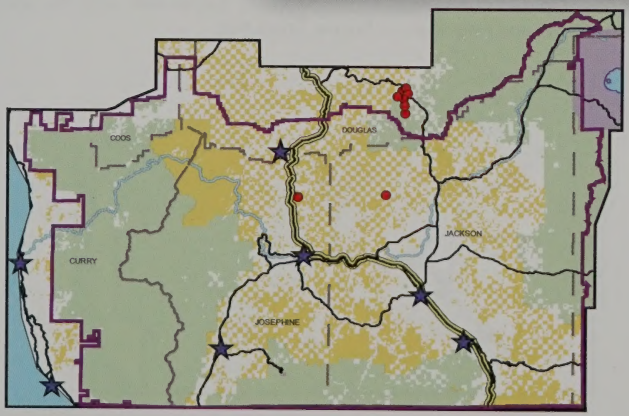


Illus: N. Fredricks

References:
Eastman
37

Not in floras, species not described until 1989.

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Code: CAHO12

Scientific Name: *Camassia howellii* S.Wats.

Family: Liliaceae (lily family)

Common Name: Howell's camassia

Plant Description: Flower stalk 3-5 dm high. Leaves 2-5 dm long, 5-12 mm wide. Racemes 20-25 cm long with many flowers. Pedicels 1.5-2.5 cm long. Tepals (flower segments) 1.5-2 cm long. Bulbs about 15 mm broad, 3 cm long. Capsule less than 1 cm long and wide.

Illus: Abrams I-416

Blooming Period: May - June.

Flower Color: Deep blue-violet.

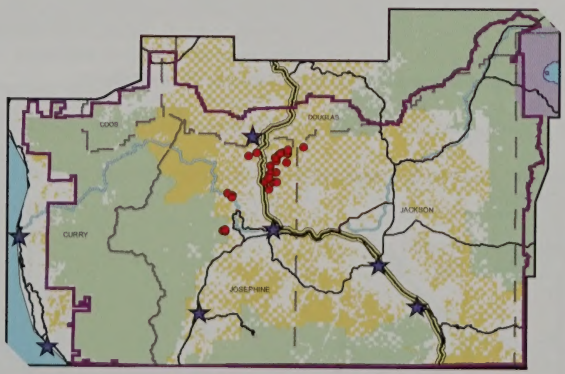
Distinguishing Characteristics: Tepals twist together after anthesis. Pedicels 1.5-2.5 cm long. Capsule very smooth and shiny, almost round.

Similar Species: Perianth segments of *C. quamash* often twist separately after anthesis. *C. quamash* ssp. *quamash* has perianth parts 2-4 cm long and capsules ovate to oblong rather than almost round. *C. quamash* ssp. *walpolei is the most* likely form to be encountered in the range of *C. howellii.* It has pale blue or lavender flowers and pedicels 1 cm long or less.

Habitat: Dry, open slopes on serpentine soils.

Distribution: Northern Josephine and Jackson Cos., Oregon. Most known sites are in serpentine hills east of Interstate 5 in the Merlin to Sexton Mtn. area, but also known from Limpy Creek and historically at Squaw Creek trail.

References: Abrams
I-416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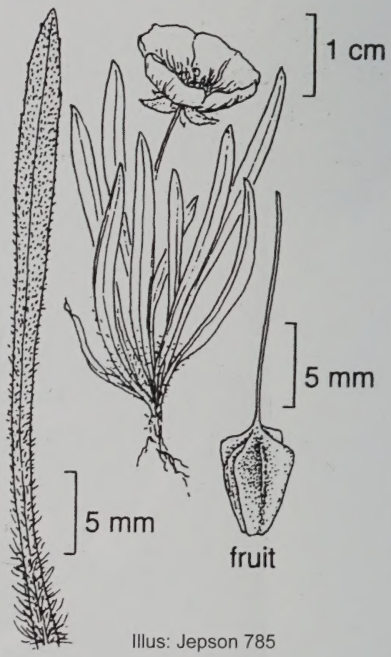
Code: CAGR14

Scientific Name: *Camissonia graciliflora* (Hook. & Am.) Raven

Family: Onagraceae (evening-primrose family)

Common Name: Slender-flowered evening primrose

Plant Description: Small annual, with no to minor stem, growing in dense clumps. Leaves 1-10 cm, linear, with densely-spreading hairs. Flower hypanthium 1.6-3.2 mm, closed by fleshy disk; sepals 4.5-8 mm; petals 5-18 mm; sterile tip of ovary 6-45 mm. The fruit is 4-angled, 4-8 mm long (4-winged near tip), and leathery. Seeds are 1.2-2 mm, tan with brown spots.



Illus: Jepson 785

Reprinted from Jepson Manual, J. Hickman, ed., 1993, with permission from the Jepson Herbarium. © Regents of the University of California.

Blooming Period: March - May.

Flower Color: Yellow, aging red.

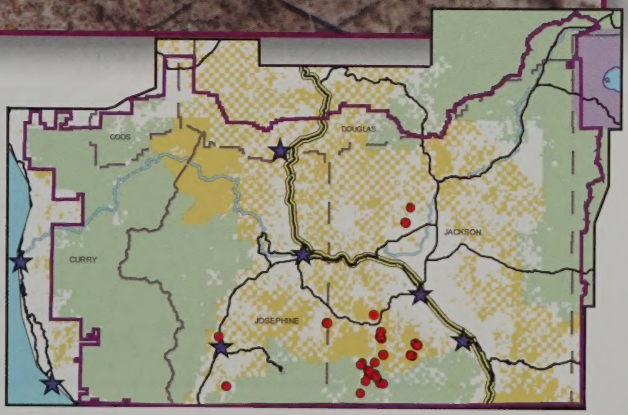
Distinguishing Characteristics: An annual with densely-spreading hairs; has little to no stem, but many narrow leaves. Fruit is 4-angled or winged, and ovary tip is distinctly long.

Similar Species: *C. palmeri* has smaller flowers (petals 2-3.5 mm, hypanthium 0.8-1.3 mm) and is more strigose, less spreading-hairy. *C. ovata, C. subcaulis*, and *C. tanacetifolia* are perennials. *C. ovata* has somewhat fleshy, ovate to elliptic leaves that often have a wavy margin. *C. subcaulis* is generally glabrous and often has lobed leaves and *C. tanacetifolia* has pinnately lobed leaves. All three species have non-winged fruit. Most other similar species have a distinct stem (such as *C. contorta)* or they have short (or no) leaf hairs. *C. contorta* also has an ovary without a slender, sterile tip and its leaves are serrate.

Habitat: Open or shrubby slopes, grasslands, oak woodlands, less than 4,500 ft.

Distribution: Jackson & Josephine Cos. in Oregon, through western California and south to Baja California.

References: Jepson 782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Code: CAAB2

Scientific Name: *Carex abrupta* Mackenzie

Family: Cyperaceae (sedge family)

Common Name: Abrupt-beaked sedge

Plant Description: Cespitose, monoecious, less than 20 cm tall, stem hollow, erect. Leaf blade 1.5-4.5 mm wide. Inflorescence dense, brown, 10-22 mm, lowest 2 internodes together less than 1/3 total inflorescence length; stigma 2. Perigynium 3.6-5.4 mm, sometimes boat shaped with wings incurved, planoconvex, strongly veined on sides, brown, upper margin green to gold, beak < 1 mm, tip cylindric. Fruit 2-sided, 1.2-1.8 mm.

Illus: Abrams I-309

Blooming Period: August.

Flower Color: Female flower bract brown or coppery.

Distinguishing Characteristics: A cespitose, monoecious hollow-stemmed sedge (base of spikelet staminate, tip pistillate) with a distinctively veined perigynium, growing at higher elevations.

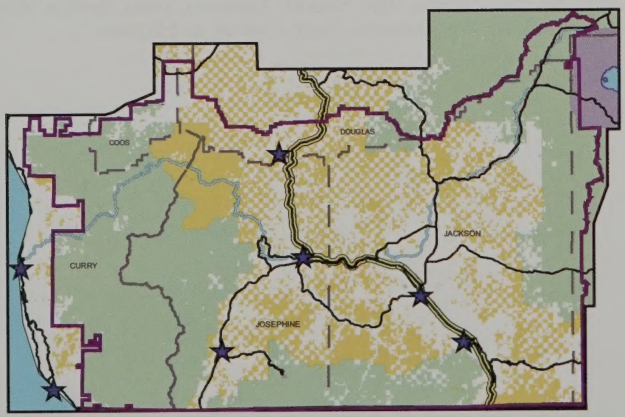
Similar Species: Subtle differences in the perigynia distinguish *C. abrupta* and *C. microptera*: the beak is less than 1 mm and 1/4 to 1/3 the body length in *C. abrupta*; *C. microptera* has a slightly larger beak (1-1.5 mm) 1/3-1/2 the body length.

Habitat: Generally moist meadows, open forest; fields and roads, above 4,000 ft.

Distribution: West Cascades, Blue Mtns, and Northern Basin and Range in Harney, Klamath, and Wallowa Cos., Oregon. Also found in California, Nevada, Washington and Wyoming.

References:

Abrams	Jepson
I-309	1121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JOSEPHINE

Code: CACA13

Scientific Name: *Carex capitata* L.

Family: Cyperaceae (sedge family)

Common Name: Capitate sedge

Plant Description: Loosely cespitose, stem 10-35 cm. Leaf blade rolled, quilled, less than 1 mm wide. Inflorescence staminate at tip of spikelet, pistillate below. Perigynia 6-25 per spikelet, 2-3.5 mm, 1.3-2 mm wide, flat around fruit, finely veined on back, pale green, faces glabrous, beak tip dark, bristle-like axis within. Fruit 2-sided, 1-1.8 mm.

Blooming Period: August.

Flower Color: Female flower bract brown with white margin.

Distinguishing Characteristics: A sedge of wet places with one spikelet per inflorescence, two stigmas, a 2-sided fruit, and a bristle-like axis present in the pergynium. In addition, the leaf blade is rolled or quill-like.

Similar Species: Other bisexual sedges in our area that grow in wet places with only one spikelet per inflorescence include *C. leptalea* and *C. nigricans*. These sedges have flat to folded leaves, not inrolled like *C. capitata*. *C. gigas* and *C. scirpoidea* are unisexual, whereas *C. capitata* is bisexual.

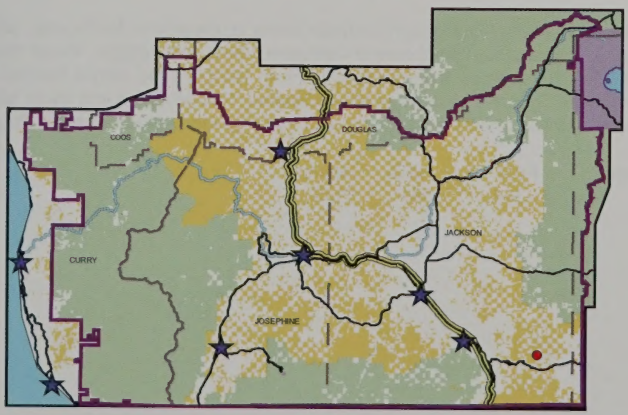
Habitat: Generally wet meadows, bogs at high elevations.

Illus: Abrams I-290

Distribution: Cascades and Basin and Range in De- schutes, Harney, Jackson, Klamath, and Lake Cos., Oregon. Also occurs in California, Idaho, Nevada, Washington, other western states, NE North America, South America, and Eurasia.

References:

Abrams	H&C	Jepson
I-290	578	1122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JOSEPHINE

Code: CACO8

Scientific Name: *Carex comosa* Boott

Family: Cyperaceae (sedge family)

Common Name: Bristly sedge

Plant Description: Short-rhizomed with large stout stem, 50-100 cm, very sharply angled. Inflorescence with lower spikelets on long, nodding stalks, pistillate flower bract awned > perigynia body. Perigynia 7.5 mm, stalked, shiny green to gold, beak teeth 1.1-2.3 mm, outcurved.

Blooming Period: June - July.

Flower Color: Female flower bract white or cream with pale red center.

Distinguishing Characteristics: A monoecious sedge with the following traits: cylindric spikelets with the lowest spikelet drooping, lowest spikelets pistillate, a tough persistent style with 3 stigmas, stalked perigynia, and a conspicuously bidentate beak with teeth 1.2-2.3 mm long and always outcurved.

Similar Species: *C. hystricina* also has a lower spikelet that nods from a long stalk, but it has sessile perigynia, not stalked like *C. comosa*. *C. utriculata* and *C. vesicaria* have erect, not nodding, lower spikelets and perigynia that are not stalked.

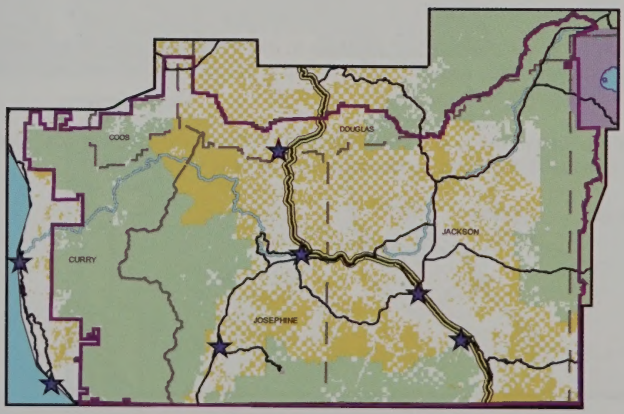
Habitat: Swamps and marshes and other wet places, sea level to 1,200 ft.

Illus: Abrams I-290

Distribution: Klamath Mtns. and Willamette Valley in Josephine, Multnomah, and possibly Columbia Cos., Oregon. Also occurs in California, Idaho, Washington, many states in eastern United States, north to Nova Scotia. From 1882 to 1945, only a handful of specimens were collected by large rivers in Oregon: Sauvie Island and Swan Island on the Columbia and Willamette River; and along a boggy, riparian meadow on the Rogue River.

References:

Abrams	H&C	Jepson
I-344	581	1122


COOS
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Code: CACR4

Scientific Name: *Carex crawfordii* Fern.

Family: Cyperaceae (sedge family)

Common Name: Crawford's sedge

Plant Description: Plant densely cespitose, the culms slender, 20-35 cm high, acutely triangular. Leaf blades 1-3 mm wide; leaves of sterile shoots not very numerous; spikes 3-12 rather closely aggregated into a head 12-26 mm long, 4-8 mm wide. Lower bracts developed but not conspicuous; scales thin, shorter than perignia, brown with hyline margins. Achenes lenticular, jointed wih the slender style; stigmas 2.

Blooming Period: July - August.

Flower Color: N/A

Distinguishing Characteristics: Spikes gynaecandrous (both male and female flowers, with pistillate flowers above the staminate), perigynia lanceolate, 0.4-1.0 (1.2) mm wide, very gradually tapered to an indistinct beak; perigynia scarcely winged at less than 0.2 mm wide.

Similar Species: *C. subfusca* has an ovate perignia generally larger (1-1.9 mm wide), with a distinct beak; perignia with an evenly narrow wing, 0.2 mm wide.

Illus: Abrams I-303

Habitat: Moist to wet places, lower montane to mid-montane. In our area, lakebeds and shores of mountain lakes and ponds that dry up in the summer. Also found in cranberry bogs on the Oregon Coast.

Distribution: Coast Range and West Cascades in Curry and Jackson Cos., Oregon. Also found in Idaho, Washington, Montana and states in the northeast.

References:

Abrams	H&C
I-303	593

COOS
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CURRY
JOSEPHINE

Code: CAGY3

Scientific Name: *Carex gynodynama* Olney

Family: Cyperaceae (sedge family)

Common Name: Hairy sedge

Plant Description: Plant loosely cespitose. Flowering stems 20-90 cm, glabrous to sparsely pilose. Leaf hairy, blade 3-9 mm wide, mouth of leaf sheath entire. Inflorescence monoecious, terminal spikelet staminate at least at tip; pistillate flower bract obtuse to slightly pointed, surface hairy, margin not ciliate, 3 stigmas. Perigynia 20-40 per spikelet, 3.8-5.5 mm long, 1.3-1.8 mm wide, 3-sided, base long-tapered, many-veined with red dots, conic beak 0.5-1.1 mm with white tip and erect teeth.

Illus: Abrams I-324

Blooming Period: N/A.

Flower Color: Female flower bract brown.

Distinguishing Characteristics: Monecious sedge with multiple, long, erect spikes; leaves, perigynia, and pistillate flower bracts all hairy; 3 (somethimes 4) stigmas. Perigynia 4.5-5.5 mm long, uniformly hairy near tip.

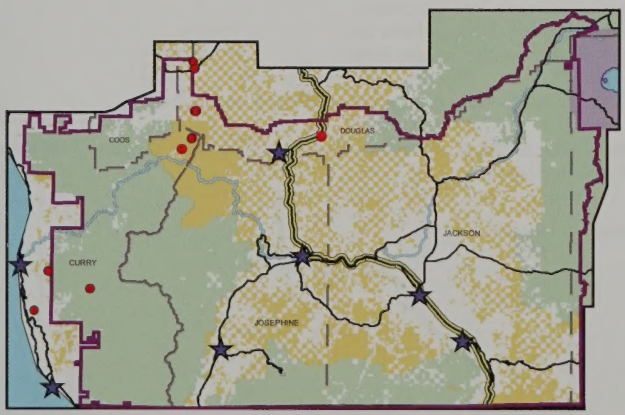
Similar Species: *C. mendoncinensis* has a leaf blade 1.7-2.5 mm wide, glabrous or occasionally very sparsely hairy. Pistillate flower bracts ciliate, white to a light, dull gold. Perigynia tip glabrous to sparsely hairy. Spikelets linear, well-separated, and often drooping. *C. luzulina* var. *luzulina* has glabrous leaves and a rust-colored and somewhat ciliate pistillate flower bract. Perigynia often glabrous. *C. lanuginosa* also has glabrous leaf blades (but has densely hairy sheath mouths), ciliate pistillate flower bracts, and perigynia outcurved teeth.

Habitat: Moist meadows, open forests, seeps.

Distribution: Found in the Coast Range, Klamath Mtns., and Williamette Valley in Coos, Curry, Douglas and Lane Cos., Oregon. Also south to Monterey Co., California.

References:

Abrams	Jepson
I-324	1127


COOS
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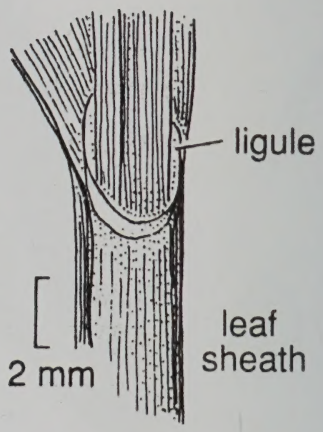
Code: CANE5

Scientific Name: *Carex nervina* Bailey

Family: Cyperaceae (sedge family)

Common Name: Sierra nerved sedge

Plant Description: Often forms large, erect, raised clumps from stout rootstocks, 3-9 dm. Stem winged or not, spongy when fresh, equaling or surpassing blades. Leaves not tufted at stem base; blades 3.5-5 mm wide. Inflorescence dense, 1.5-3 cm long, 6-18 mm wide; spikes 6-12, short. Perigynia spreading, 3-4.5 mm, 1-1.8 mm wide, widest usually at base, body mostly long-tapered above, many ribbed, green to medium brown, shiny, lower wall filled with pithy tissue. Beak 0.8-1.7 mm, poorly defined, tip notched. Bracts little developed and inconspicuous. Scales shorter than perigynia, ovate, dull-brown, with hyaline margins. Fruit 1.5-1.8 mm long, 1-1.3 mm wide.



Illus: Jepson 1135

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Blooming Period: July - August.

Flower Color: Female flower bract brown with white margin.

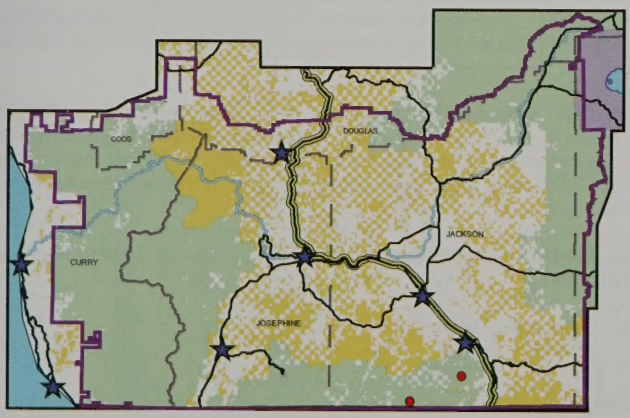
Distinguishing Characteristics: Leaf sheath white spotted on back. Mouth of sheath u-shaped with a thick translucent rim.

Similar Species: *C. neurophora* and *C. jonesii are* two other common sedges with 2-sided achenes inside many-ribbed fruits with pith filling the lower 1/2. *C. neurophora* (Coast Range) has an often cross-wrinkled sheath front, without a thick rim, and the sheath back is not white-spotted. *C. jonesii,* a smaller plant, generally inhabits sunny wetlands, has firm stems instead of spongy, and does not have the distinct thickened rim on the sheath front.

Habitat: Moist to wet places, often shaded, 3,600 ft. and higher.

Distribution: Klamath Mtns. of Jackson and Josephine Cos., Oregon. Also known from California and Nevada.

References: Jepson
1131


COOS
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JOSEPHINE

Code: CASC14

Scientific Name: *Carex scabriuscula* (Holm) Mackenzie
(includes ***C. gigas*** (Holm) Mackenzie)

Family: Cyperaceae (sedge family)

Common Name: Siskiyou sedge

Illus: Abrams I-317

Plant Description: Stems stout, 3-4.5 dm high. Leaves 5-l0 per plant, 2-3 mm wide, stiff, crowded at base. Spikelets solitary and terminal. Female spikelets 1.5-4 cm long and 4-8 mm wide with a bract 2-4 cm long, about 1-3 cm below. Unisexual spikelets 2-3 per inflorescence, stigmas 3 (sometimes 4). Perigynia flat, shiny, brown to black, sessile, and truncate at base.

Blooming Period: June - July.

Flower Color: Brown.

Distinguishing Characteristics: Plants dioecious (unusual in *Carex*). Flowering spikelets 1 or 2-3 per plant. Leaves yellowish-green and much shorter than stems; fine hairs on upper leaves. Scales almost equaling the shiny perigynia, red-brown to black with light midrib. Fruits rather flat.

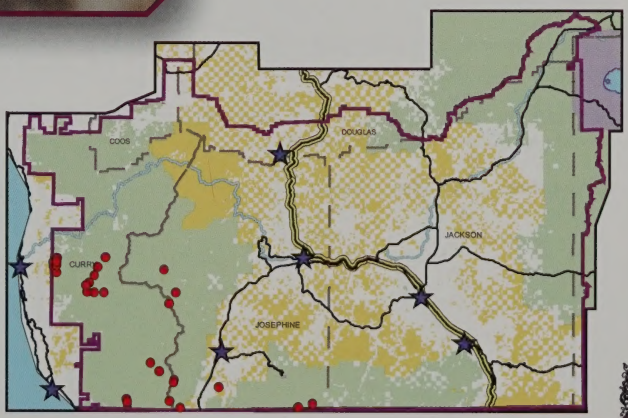
Similar Species: Similar to other *Carex*, but distinguished by unisexual spikes. Some members of the sedge group *Montanae* occasionally have unisexual spikes, but in this group, female fruit is quite rounded and female spikelets are shorter. *Montanae* species shorter in stature than *C. gigas*. *C. scirpoidea* var. *scirpoidea* and *C. serpenticola* have less than 3 spikelets and 3 (sometimes 4) stigmas, but can have plump, 3-sided perigynia stipate or tapered at base. If staminate only, they can be distinguished by the fibrous culms and lack of scales, whereas *C. scabriuscula* culms are scaly and fiberless. Pistillate flower bracts of *C. scirpoidea* var. *pseudoscirpoidea* are obtuse or acuminate, often not ciliate, wider than the perigynia. *C. gigas* was initially dubbed as a close look-alike to *C. scabriuscula*, but no quantitative vegetative characteristics separate *C. gigas* and *C. scabriuscula* (no real differences in perigynia or achenes) - it was concluded the species are synonymous (Dunlop 1991).

Habitat: Vernally or perennially wet serpentine above 2,800 ft. in the Coast Range and 5,000 ft. for inland ranges. Generally grows in open, sunny sites with little cover. In wettest sites, often associated with California Lady's Slipper, California Pitcher Plant and western azalea. In drier sites, often within open Jeffrey pine stands. Habitat often appears dry by flowering time.

Distribution: Northern Klamath Mtns. from south of Gold Beach District, Oregon to Mt. Eddy, California.

References:

Abrams	Jepson
I-317	1126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JOSEPHINE

Code: CASE2

Scientific Name: *Carex serratodens* W. Boott

Family: Cyperaceae (sedge family)

Common Name: Saw-tooth sedge

Plant Description: Loosely clumped, stoloniferous, monoecious sedge. Culms slender, smooth, sharply triangular, 3-12 dm tall, and longer than leaves; blades 1.7-4 mm wide, basal leaves minute. Terminal spikelet staminate, at least at base; lower spikelets sessile. Pistillate flower bract smaller than perigynium, with a hairy awn. Perigynia 3-5 mm long, 1.2-2 mm wide, 3-sided, mostly flattened around the fruit, beak 0.3-1 mm, green and purple-dotted, with teeth minutely hairy. Scales narrowly ovate, acute, dull to chestnut brown, shorter than perigynia. Fruit 3-sided, 1.8-2.5 mm long and 1.1-1.8 mm wide. Fruiting May-July.

Illus: Abrams I-329

Blooming Period: Late May - late June.

Flower Color: Female flower bract red-brown with a pale mid-stripe.

Distinguishing Characteristics: Leaves pale in color. Staminate spikelet 1, located above female spikelets; lowest spikelet bract sheath less than 5 mm. Pistillate flower bracts hairy-awned. Short-cylindrical, sessile lower spikelets with spreading perigynia. Perigynia face glabrous. Stigmas 3, delicate style.

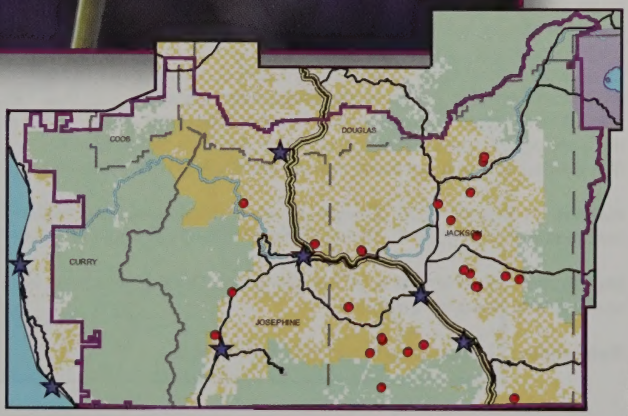
Similar Species: *C. livida*, *C. california*, and *C. mendocienensis* (also of serpentine habitats) have a bract sheath on the lowest spikelet greater than 6 mm.

Habitat: Moist meadows and rocky places near streams and seepages, frequently on, but not limited to serpentine soils; below 6,000 ft.

Distribution: Douglas, Jackson and Josephine Cos., Oregon; also found in the Sierra Nevada and Coast Ranges of California.

References:

Abrams	Jepson
I-329	1134
	C. bifida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JOSEPHINE

Code: CAKL?

Scientific Name: *Carex* sp.
(***C. klamathensis*** - in editum)

Family: Cyperaceae (sedge family)

Common Name: Pale sedge (proposed: Klamath sedge)

Plant Description: Rhizomatous, with glabrous stems arising singly or a few together, 15-60 cm tall. Leaves about 4 mm wide. Perigynia 1.7-3.6 mm long, 1.2-2.4 mm wide; ascending at maturity, pale, papillose, 3-stigmas. Terminal male spike 1-2.5 cm long, lateral female spike 1-2 cm long. Achenes lenticular or trigonous, surface papillose.

Blooming Period: May - August.

Flower Color: Female flower bract red-brown.

Distinguishing Characteristics: Leaf blades glaucou flat or folded. Base of stem pale brown, with persistent dead leaf bases from previous year. Spikelets 2-5, not crowded. Top of perigunium usually more or less bent, lacking a well-defined beak, green-glaucous with minute bumps, stigmas 3, styles 2 or 3. Lowest bract o inflorescence with a sheath around the stem. Sheath of lowest inflorescence bract > 6 mm (usually ~10 mm). Typically found in serpentine wetlands.

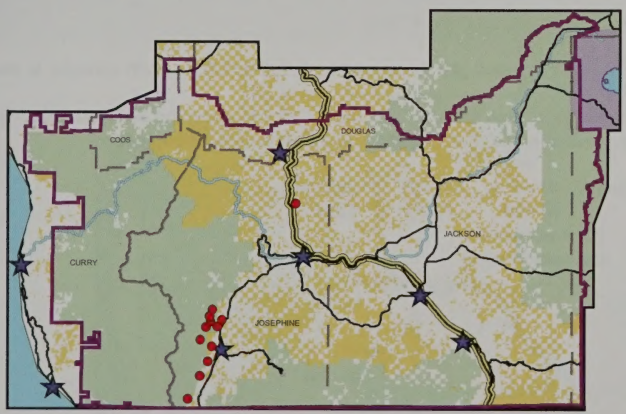
Similar Species: Many sedges are superficially similar. Pale, papillose, 3-stigma perigynia and long rhizomes of *C. sp. nov.* were initially responsible for misidentification as *C. californica.* Further observation revealed that *C. californica* has tubular perigynium beaks, rich red-brown shoot bases, rhizomes and scales. *C. livida* is also very similar, but the perigynium top is straight, it grows on non-serpentine sites, and probably is not present in this area. Compared to *C. sp. nov.* in Josephine Co., Oregon, *C. livida* has narrower leaves, less staminate flowers, and longer, fusiform perigynia. In Jackson Co., Oregon, *C. sp. nov.* is most likely to be confused with *C. hassei*, which can have 2 to 3 stigmas per perigynium. Although dimentions of most *C. hassei* traits differ from the same traits of *C. sp. nov.*, *C. hassei* may, on occasion, produce robust plants that overlap in measured traits, making identificaiton troublesome.

Illus: Hitchcock et al I-286
C. livida

Habitat: In Josephine Co., Oregon, *C. sp. nov* has been documented only in serpentine wetlands at 1,300-1,800 ft. Some of these wetlands dry out in mid-late summer.

Distribution: Klamath Mtns. in Josephine Co., Oregon, and three isolated locations southwest of Redding, California.

References: Unpublished report of B. Wilson et al.


COOS
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Code: CASC20

Scientific Name: *Castilleja schizotricha* Greenm.

Family: Schrophulariaceae (figwort family)

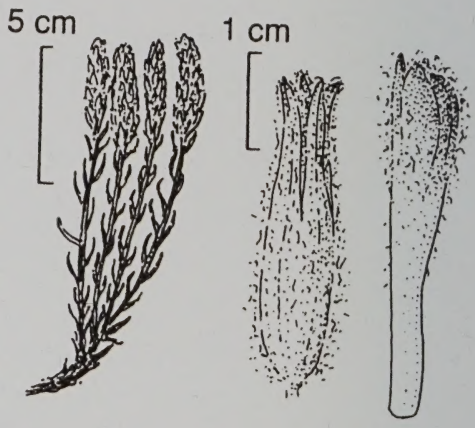
Common Name: Split-hair paintbrush

Plant Description: Perennial, stems 0.8-1.5 dm long, white-wooly with branched hairs. Leaves 5-20 cm long. Calyx 13-18 mm long, corolla 15-20 mm long, the upper lip of corolla 4-5 mm long.

Blooming Period: July - August.

Flower Color: Purple.

Distinguishing Characteristics: Perennial, seldom over 1.5 dm tall. Lower corolla lip at least 2/3 as long as the upper lip. Foliage appearing gray because of matted, woolly, white, branched hairs. Bracts of inflorescence show purple through the white, woolly hairs. Bracts, and almost-hidden flowers, erect and appressed to stem; consequently the plant always appears to be pre-bloom or post-bloom (rather than in bloom). Lower leaves entire.



Illus: Jepson 1025

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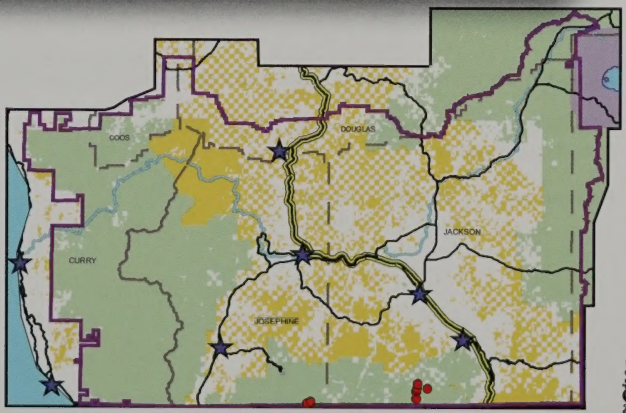
Similar Species: Some species of *Orthocarpus* superficially resemble this plant, but all *Orthocarpus* species are annuals. *C. arachnoidea* has all leaves lobed and inflorescence appears yellowish or reddish rather than purple. Inflorescence not as woolly, hairs are simple, and leaves are 20-60 mm long.

Habitat: On decomposed granite or marble, 5,000-6,000 ft., north aspects, in red fir forests.

Distribution: Josephine and Jackson Cos., Oregon, along the Siskiyou crest. In California, located in the Klamath Mtns. and Red Buttes Wilderness.

References:

Abrams	HCOT	Jepson
III-824	IV-301	1024
[C. *arachnoidea* var. *schizotricha*]		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JOSEPHINE

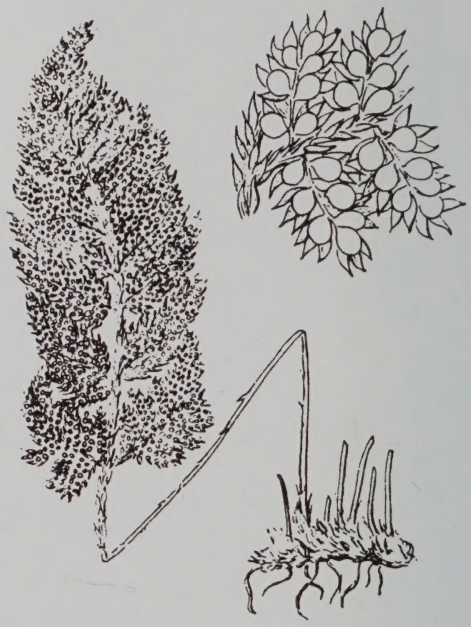
Code: CHCO4

Scientific Name: *Cheilanthes covillei* Maxon

Family: Pteridaceae (brake family)

Common Name: Coville's lipfern

Plant Description: Fern with numerous fronds. Leaf 8-22 cm, 3-4 pinnate, dark green. Leaf segments generally round, upper glabrous, lower surface concave and obscured by scales. Scales dissected, basal scales cilate, dark-brown to black, rarely bicolored.



Illus: Abrams I-28

Distinguishing Characteristics: Upper segment surface glabrous, without scales, and lower surface scales dissected, but with large undivided bodies.

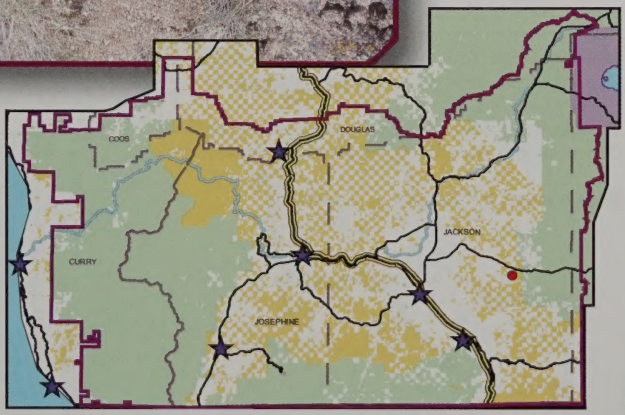
Similar Species: In Jackson Co., originally misidentified as *C. intertexta.* The scales in *C. intertexta* and *C. gracillima* have conspicuous ciliate margins. *C. intertexta* is 3-pinnate, some upper leaf segments with sparse dissected scales, the lower segments deeply dissected with a body only 1-2 cells wide. Scales generally bicolored with paler margins. The more common *C. gracillima* is generally 2-pinnate, with linear-oblong leaf blades. Leaf segments round to oblong, scales on lower surface, long-ciliate, and deeply dissected. All three species are known to hybridize. Other xeric rock-ferns, such as *Aspidotis* and *Pellea,* have glabrous lower leaf segments without scales, hairs or glands.

Habitat: Rock crevices, base of rocks, rocky slopes, sun to shade.

Distribution: West Cascades in Jackson Co., Oregon; also occurs in California, Nevada, Utah, Arizona.

References:

Abrams	Jepson
I-28	104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DOUGLAS
JACKSON
CURRY
JOSEPHINE

Code: CHIN

Scientific Name: *Cheilanthes intertexta* (Maxon) Maxon

Family: Pteridaceae (brake family)

Common Name: Coastal lipfern

Plant Description: This small fern has 3-4 pinnate fronds with round segments. Fronds are broadly triangular in outline. Leaf segments round, and upper segment surface has sparse, dissected scales. Lower segment surface has deeply dissected, narrow-lobed scales. Scales generally bicolored with paler margins.

Distinguishing Characteristics: Scales on both segment surfaces, but are sparse on upper surface. Lower segment deeply dissected with a body only 1-2 cells wide.

Similar Species: In *Cheilanthes colvillei*, upper segment surface glabrous while the lower surface has scales with large bodies (not as deeply dissected as those of *C. intertexta*); scales black to dark brown and are rarely bicolored. The more common *C. gracillima* is usually 2-pinnate, fronds are narrowly triangular in outline, and the segments are generally oblong (rarely round), with dense tomentum-like scales underneath. *C. intertexta* is a fertile polypoid hybrid of *C. colvillei* and *C. gracillima;* all three are known to hybridize. Other xeric rock-ferns, such as *Aspidotis* and *Pellea,* have glabrous lower leaf segments without scales, hairs or glands.

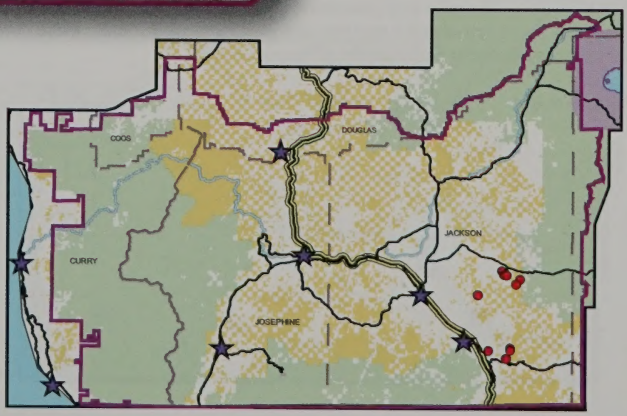
Illus: Abrams I-28

Habitat: Rock crevices, foothills to mid-montane. Current known sites in Oregon are on andesite.

Distribution: Klamath Mtns. in Douglas and Jackson Cos., Oregon. Also found in California and Nevada.

References:

Abrams	Jepson
I-28	105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JOSEPHINE

Code: CHAN2

Scientific Name: *Chlorogalum angustifolium* Kellogg

Family: Liliaceae (lily family)

Common Name: Narrow-leaved amole

Plant Description: Stem 3-6 dm tall. Basal leaves 1-3 dm long, 2-5 mm wide. Inflorescence a panicle, the branches spreading, 3-7 dm long. Tepals 8-12 mm long spreading but not recurved; pedicels 2-3 mm long. Bulb 1.5-2.5 cm in diameter and 3-5 cm long.

Blooming Period: April - July.

Flower Color: White with greenish-yellow midvein.

Distinguishing Characteristics: Flowers open in the evening. Stems slender. Leaf margins not wavy, but narrow (2-5 mm wide). Styles (2) 3-4, 8 mm long, and do not exceed the perianth. Bulb has membranous coats and small, delicate fibers.

Similar Species: *C. pomeridianum* and *C. toddii* (in. ed.) are more robust species, with taller, stouter stems, wider leaves, longer pedicels and larger flowers.

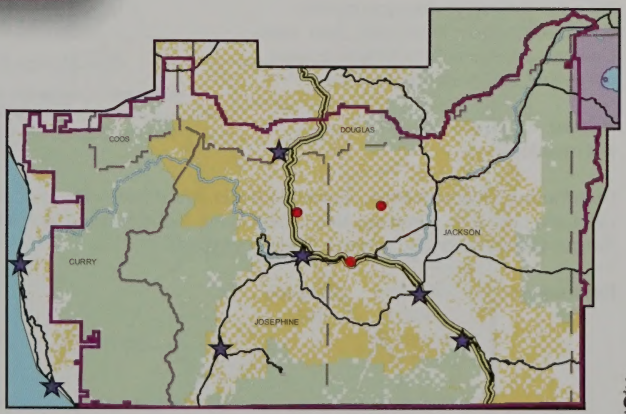
Illus: Abrams I-414

Habitat: Open, dry places, heavy soil in meadows and woodlands below 1,500 ft.

Distribution: Jackson and Josephine Cos., Oregon; known from only one site between Gold Hill and Central Point and one site outside Grants Pass. More common in California inner Coast Ranges and foothills of Sierra Nevada.

References:

Abrams	Jepson
I-414	1189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JOSEPHINE

Code: CIQU3

Scientific Name: *Cicendia quadrangularis* (Lam.) Griseb.

Family: Gentianaceae (gentian family)

Common Name: Timwort

Plant Description: Small annual less than 9 cm tall, glabrous. Stems simple or few branched from near base, bearing a solitary terminal flower. Basal leaves 4-9 mm, cauline leaves less than internodes, opposite. Flower parts in 4's, calyx wider than corolla tube, lobes smaller than tube, tube hemispheric, sinuses between lobes wide, truncate; corolla salverform, tube greater than lobe, 10 mm or less; ovary sessile, pistil 1, style distinct, stigma 2-lobed.

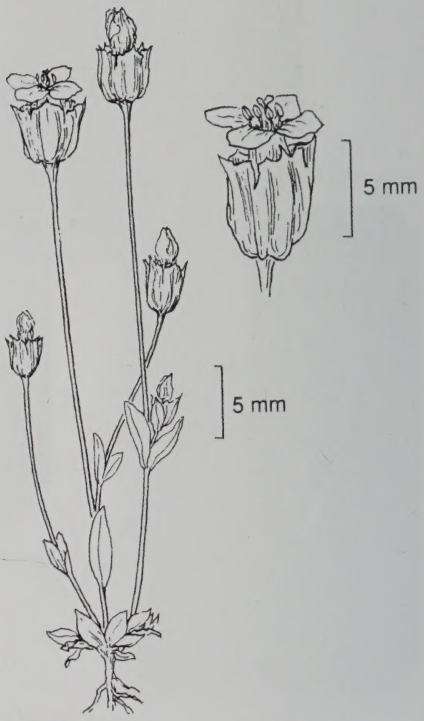
Blooming Period: April - early June.

Flower Color: Yellow.

Distinguishing Characteristics: A small annual gentian with an unusual yellow flower – the salverform corolla lobes just peek out of a broad, almost square, cup-like calyx. The few, small cauline leaves look sparse due to the relatively long pedicels.

Similar Species: Overall, *Gentiana tenella* has a similar form, but the funnel-shaped flowers are pale violet-blue to white with two fringed scales at the base of each lobe; the calyx not hemispheric. *Centarium* is somewhat similar, but the calyx is deeply lobed and closely appressed to the corolla tube. Also, most *Centarium* species have pinkish flowers, not yellow, and flower parts in 5's.

Habitat: Open places, vernally wet meadows.



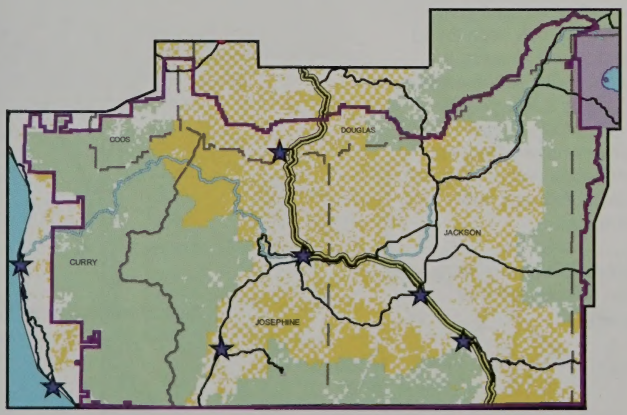
Illus: Jepson 671

Reprinted from Jepson Manual, J. Hickman, ed., 1993, with permission from the Jepson Herbarium. © Regents of the University of California.

Distribution: Klamath Mtns., Columbia Basin, Willamette Valley in Coos, Douglas, Lane and Linn Cos., Oregon. Also occurs in the Sierra Nevada foothills and Coast Range, California, and in western South America.

References:

Abrams	Jepson
III-351	667
Microcala q.	


COOS
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Code: CIEL

Scientific Name: *Cimicifuga elata* Nutt.

Family: Ranunculaceae (buttercup family)

Common Name: Tall bugbane

Plant Description: Large perennial, 1-2 meters tall; leaves 2-3-ternate, maple-like leaflets 4-12 cm long. Flowers in a large compound panicle, petals lacking, deciduous sepals, 3-4 mm, numerous stamens. Fruit a follicle, 10-12 mm long, usually sessile.

Blooming Period: June - August.

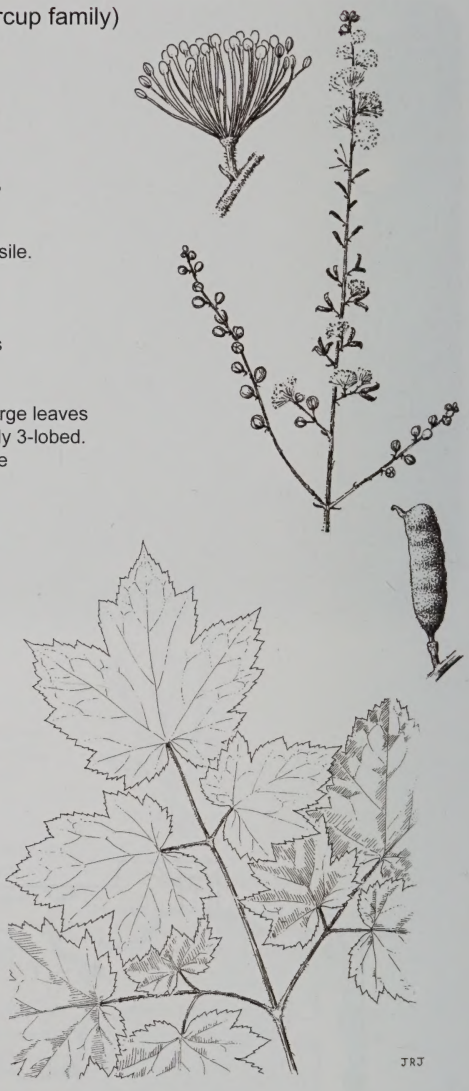
Flower Color: Petals lacking, sepals cream to pinkish.

Distinguishing Characteristics: Large leaves ternately divided and leaflets shallowly 3-lobed. Flowers numerous, borne in spike-like compound racemes.

Similar Species: *Actaea rubra* (baneberry) is shorter (< 1 m), has ternately 3-compound leaves that are sharply toothed and incised, and complete flowers on a short dense terminal raceme. Showy red berries. Often grows intermixed with *Cimicifuga elata.*

Habitat: In southwest Oregon, *C. elata* mostly occurs in white fir and Douglas-fir forests. Forest structure more open than in other regions. *C. elata* has been found near springs and drainages, as well as in clearcuts. Often north to northeast-facing slopes, 4,300-5,400 ft. Habitat in southwest Oregon somewhat atypical; the rest of *Cimicifuga elata's* range tends to be more mesic with denser canopies.

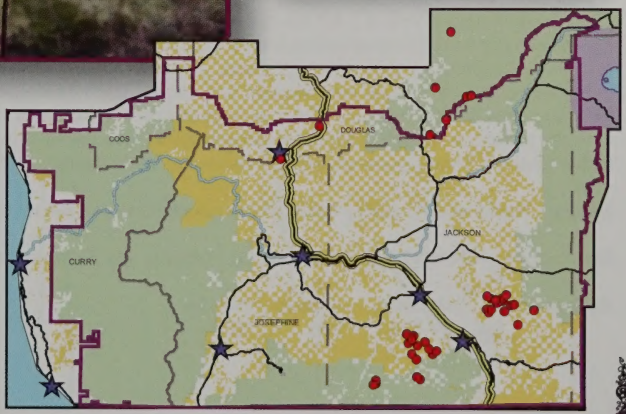
Distribution: British Columbia to southern Oregon, west of Cascade range.



Illus: Hitchcock et al. II-340

References:

Abrams	H&C	HCOT
II-179	129	II-337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Code: CICI

Scientific Name: *Cirsium ciliolatum* (Henderson) J.T. Howell

Family: Asteraceae (sunflower family)

Common Name: Ashland Thistle

Illus: Meinke 107

Plant Description: Mature plants 0.6-2 m tall, usually surrounded by > 1 basal rosette. Stem densely white-tomentose to cobwebby. Leaves tomentose-cobwebby white below, gray-green hairy above. Flower heads white; involucre campanulate and constricted near top; back of phyllaries with conspicuous linear gland on midrib. Inflorescence in raceme or panicle-like clusters.

Blooming Period: June - August.

Flower Color: Dull white, light tan to lavender.

Distinguishing Characteristics: White-cobwebby hairs on stem and lower leaves, upper leaves gray-hairy. Corolla white-lavender or becoming tan or brownish. Phyllaries entire, spine tips 1-3 mm with glandular areas on midrib.

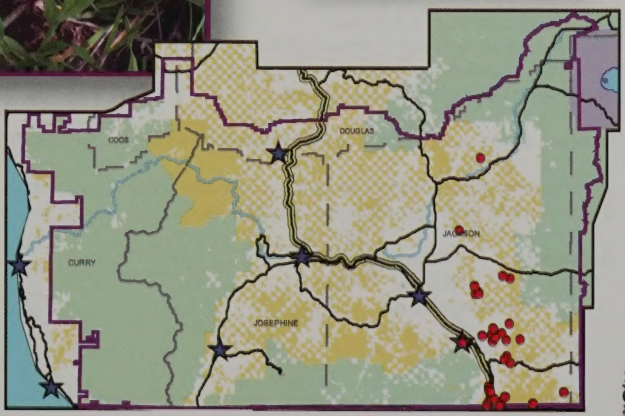
Similar Species: *C. remotifolium* and *C. cymosum* are perennial thistles with white to pale purple flowers. In C. *remotifolium,* some phyllaries fringed or spiny-toothed and lack a sticky glandular area. *C. cymosum* has two types of hairs on leaf undersides, tomentose hairs and jointed multicellular hairs mostly found on the midrib. Be careful: the short jointed hairs can be deciduous and this species is known to hybridize with *C. ciliolatum*. Heads often solitary (sessile or on short branches) or in a ± flat-top cyme-like infloresence (occasionally in raceme or panicle-like clusters). *C. brevistylum* is an annual to biennial thistle (although occasionally a short-lived perennial); grows in moist areas. Leaves sparsely jointed-hairy above and tomentose below. Phyllaries not glandular and may be spiny-ciliate. Another species with white to purple flowers is *C. scariosum*, an annual to short-lived perennial. Leaves glabrous to faintly tomentose above, glabrous to densely tomentose below. Phyllaries glabrous, entire to fine-toothed. Heads generally sessile, nestled in basal rosette, or clustered at stem tips.

Habitat: Rocky slopes, grassy fields; white oak savanna or open woodlands 2,400-5,000 ft.

Distribution: Klamath Mtns. in Jackson Co., Oregon, and Siskiyou Co., California.

References:

Abrams	Jepson	Meinke
IV-518	235	106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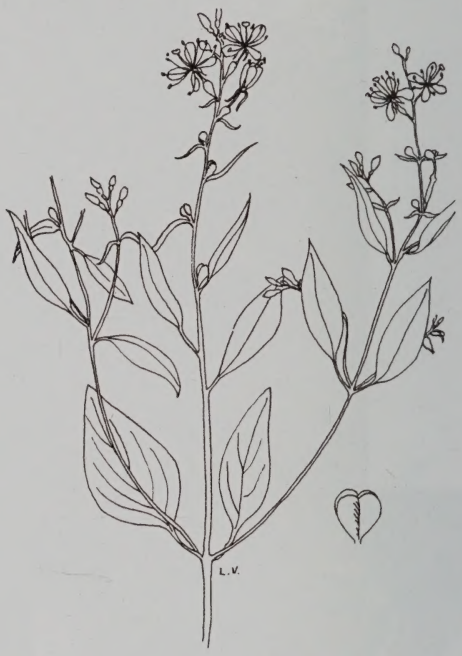
Code: CLHE4

Scientific Name: *Clarkia heterandra* (Torr.) Lewis & Raven

Family: Onagraceae (evening-primrose family)

Common Name: Small-fruit clarkia

Plant Description: Annual, stem erect, 1-4 dm tall. Leaf blades alternate, 2-8 cm long, about half as wide; petioles 5-20 mm long. Inflorescence axis straight when in bud, bracts leaf-like. Flower tube 1-2 mm; sepals deciduous, staying fused in 4's; petals 5-6 mm. Alternate stamens fertile, 2 mm long; opposite stamen sterile, 1 mm long, stigma not beyond anthers. Capsule ridged.



Abrams III-210
Listed as *Hetergaura h.*

Blooming Period: May - June.

Flower Color: Pink (later lavender).

Distinguishing Characteristics: Differs from other *Clarkia* in that the fruit is indehiscent (not splitting open), nut-like and short (2-3 mm) and 1-2 seeded. Has narrow petals without spots.

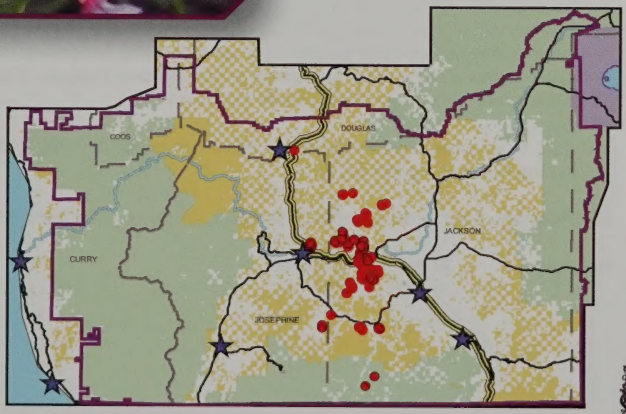
Similar Species: Other Clarkias in the area have wider, bowl-shaped or clawed petals. Their fruit is greater than 5 mm and not nut-like. Also *C. gracilis, C. modesta, C. rhomboidea and C. lassenensis* have pendent buds. *C. purpurea* (and its subspecies) and *C. amoena* have petals with color spots. *Epilobium* species have hair-tufted seeds at one end, or sepals erect at flower. Also, *Epilobium* stigmas generally club-like and leaves generally opposite.

Habitat: Dry, shaded sites in woodlands and pine forests, 1,500-5,000 ft.

Distribution: Klamath Mtns. in Jackson and Josephine Cos., Oregon. Klamath Range, Sierra Nevada, and Coast Ranges in California.

References:

Abrams	Jepson
III-211	790
Heterogaura h.	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Code: COMA

Scientific Name: *Collomia mazama* Coville

Family: Polemoniaceae (phlox family)

Common Name: Mt. Mazama collomia

Plant Description: Perennial with few to many stems, 15-30 cm high, glandular-hairy and strong scented. Leaves are glabrous, broadly-lanceolate to lance-oblong, upper leaves entire with short petioles to sessile, lower leaves 3-5-toothed near apex (not shown in illustration), 3-5 cm long. Inflorescence in several congested clusters, with long white glandular hairs. Calyx narrowly campanulate with triangular acute lobes, 8-10 mm long. Corolla, 1.5 cm long, throat gradually dilated upwards with oblong lobes 5-6 mm long, stamens and style exerted.

Blooming Period: July - August.

Flower Color: Pink to lilac or bright purple.

Distinguishing Characteristics: An upright, perennial with two types of leaf margins: upper leaves entire, lower with a few sharp teeth. Also look for white glandular hairs on the inflorescence.

Illus: Abrams III-410

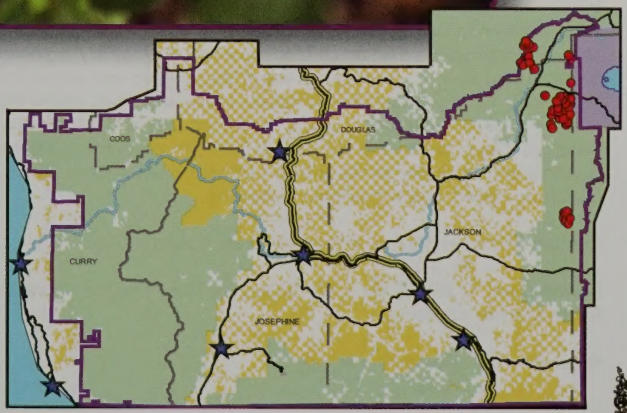
Similar Species: *Collomias* in this region, such as *C. grandiflora, C. linearis, C. tinctoria,* are annuals with entire leaves. Other high elevation *Collomia* perennials possess flaccid or cespitose stems and palmate leaves, such as *C. larsenii*, in volcanic talus in the Cascades, or *C. debilis*, found in the Blue Mountains of northeastern Oregon. *Collomias*, unlike many other phlox family members, lack a calyx membrane.

Habitat: Open woods, wet meadows, road cutbanks above 9,000 ft. or 4,500-6,000 ft. around the Rogue-Umpqua Divide.

Distribution: Southern Cascades in Douglas, Jackson, and Klamath Cos., Oregon.

References:

Abrams	Eastman
III-406	73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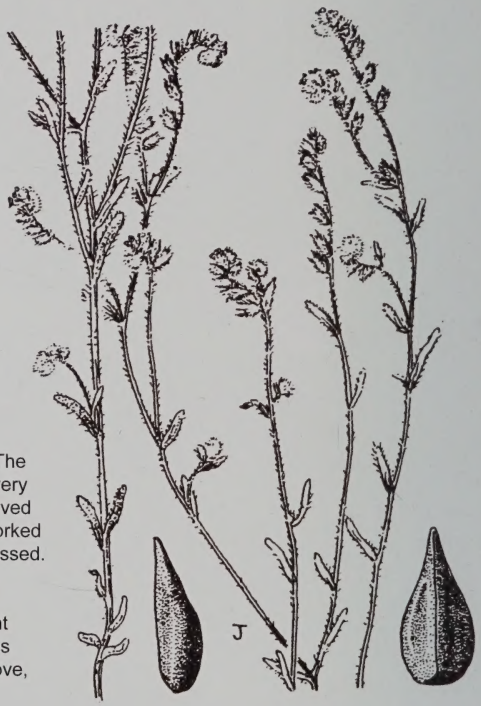
Code: CRMI14

Scientific Name: *Cryptantha milo-bakeri* I.M. Johnston

Family: Boraginaceae (borage family)

Common Name: Milo Baker's cryptantha

Plant Description: Annual 15-40 cm; ascending branches with both appressed and spreading hairs. Leaves 0.5-3 cm, linear to oblong, densely hairy to bristly. Flower spikes mostly in 2's, 5-15 cm long; calyx in fruit 3-5 mm long, dense with straight hairs; corolla 2-4 mm wide. One nutlet per flower, 1.5-2 mm, back smooth, shiny, groove mostly closed, except forked base.



Illus: Abrams III-588

Blooming Period: May - July.

Flower Color: White to creamy yellow.

Distinguishing Characteristics: The *Cryptantha* genus is composed of very stiff-bristly plants. Nutlets well grooved above the scar, with the groove 2-forked at base and the scar generally recessed. Nutlets are important for species identification. *C. milobakeri* has 1 nutlet and its sepal hairs are straight and generally ascending. Nutlet has a smooth, shiny back, a raised groove, and sharp, angled edges.

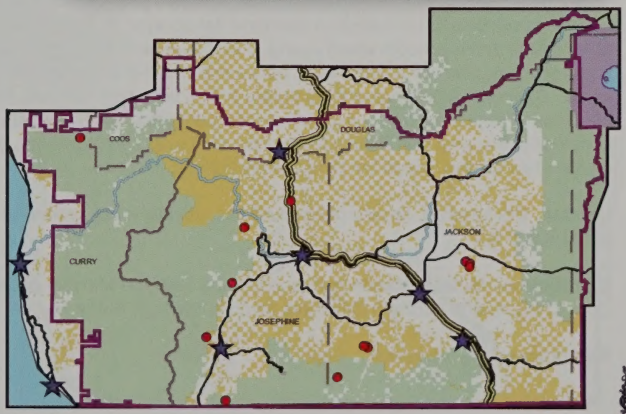
Similar Species: *Cryptantha* differs from *Plagiobothrys* by nutlets; *Cryptantha* nutlets have a ventral groove leading up from the scar, whereas in *Plagiobothrys* the groove is replaced by a keel. *C. flaccida* has sepal hairs curved and almost hooked (especially at sepal tips). *C. intermedia* has 1-4 nutlets; larger and bright yellow flowers, an open groove on the nutlets, and the nutlet back is not smooth. Both *C. simulans* and *C. torreyana* have 4 nutlets. The nutlet back is not smooth in *C. simulans*, and is almost flat in *C. torreyana*. C. affinis is superficially similar with 1-4 smooth, shiny nutlets. The nutlet groove is off-center, closed, and somewhat overlapping.

Habitat: Rocky or gravelly slopes, generally coniferous forests below 4,500 ft.

Distribution: Curry, Jackson, and Josephine Cos., Oregon. Northwest, Coast Range, and Sierra Nevada, California.

References:

Abrams	Jepson
III-587	376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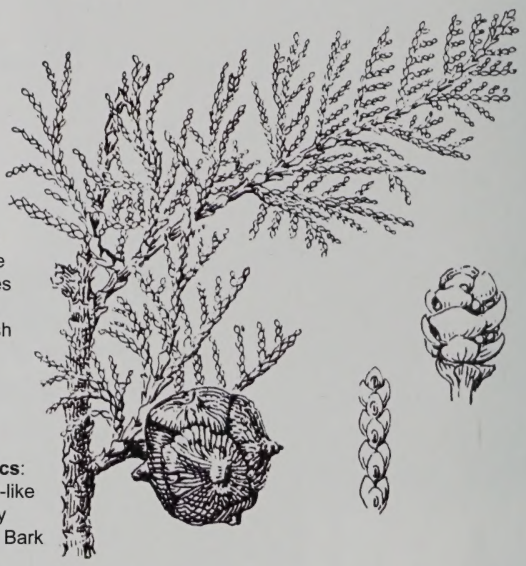
Code: CUBA

Scientific Name: *Cupressus bakeri* Jepson

Family: Cupressaceae (cypress family)

Common Name: Baker's cypress

Plant Description: Tree or shrub, 10-30 m high with a narrow crown. Branchlets mostly over 12 mm long, 1-1.3 mm thick, and are not arranged in flat sprays. Foliage is blue-green. Female (seed) cones about 10-25 mm, spherical, warty, have 4-8 scales, and have an obvious projection on each scale. Male (pollen) cones are 2-3 mm long, have 6-10 scales with 3-5 pollen sacs per scale. Bark is somewhat flaky, reddish when young and grayish when old.



Illus: Abrams I-73

Blooming Period: N/A.

Distinguishing Characteristics: Foliage light gray-green; scale-like leaves instead of needles; very aromatic. Very slender twigs. Bark flaky, red-brown, becoming gray. Female cones round and warty, male cones long with 6-10 scales.

Similar Species: Similar to other cypresses, although none occur in our area. *Chamaecyparis lawsoniana* and *C. nootkatensis* (formerly in the *Cupressus* genus) each has 2-5 winged seeds per cone scale, no scale projections, and, as with all our cedars, branchlets flat in x-section that form flat sprays. *C. lawsoniana* has very thick, fibrous bark that is smooth when young. Female cone is not warty, has 7-10 scales with no projections, and is 6-10 mm long; male cone has 5-6 scales with 2 pollen sacs per scale. *C. nootkanensis* has gray to purple-brown bark both fissured and scaly. Foliage not glaucous. Female cone with 4-6 scales that are neither warty nor with projections; male cone has 4-5 scales with 2 sacs per scale. *Juniperus communis* var. *occidentalis* (western juniper) has similar foliage but blue berries instead of cones.

Habitat: Dry forested, brushy or open slopes, usually rocky ground or serpentine soils at 3,800-6,000 ft.

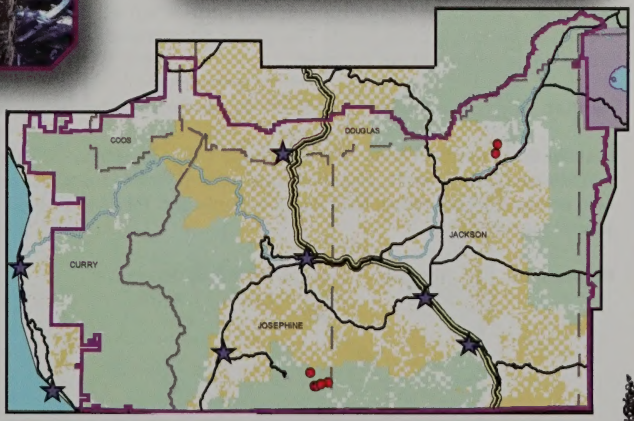
Distribution: Isolated stands in Cascades and Siskiyou Mtns. in Jackson and Josephine Cos., Oregon, and northern California south to the high Sierra Range.

References:

Abrams	Eastman	Jepson
I-73	55	112

Old bark

Young bark



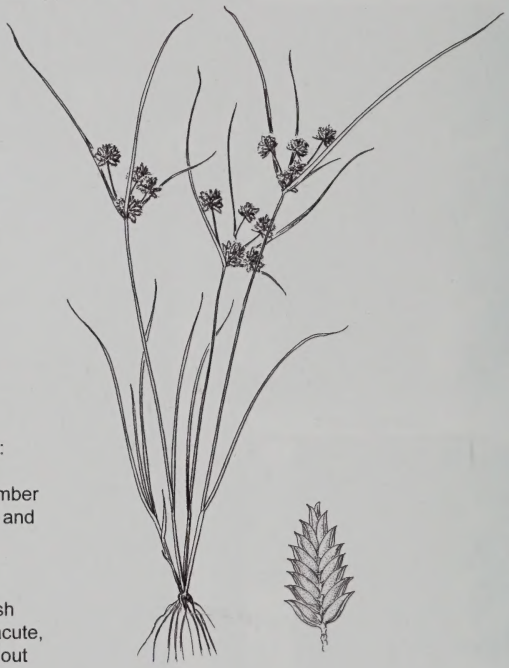
Code: CYAC2

Scientific Name: *Cyperus acuminatus* Torr. & Hook ex Torr.

Family: Cyperaceae (sedge family)

Common Name: Short-pointed cyperus

Plant Description: Annual 5-40 cm. Culm 3-ranked, basal leaves 1-2 mm wide. Inflorescence bracts 2-3, umbel simple to 5-rayed; spikelets 4-7 mm long, in roundish heads; flower bract 2-ranked, ovate lanceolate, 1.3-2 mm, 3-veined, tip outcurved; stigmas 3, stamen 1. Fruit 3-angled, 0.7-1.1 mm, obovoid-elliptic, stalked, light brown, tip acute, beaked.



Illus: Hitchcock et al. I-348

Blooming Period: July - September.

Flower Color: N/A

Distinguishing Characteristics: Short-pointed flower bracts with three veins. Also, an annual member of the genus with globose heads and only one stamen.

Similar Species: The annual *Cyperus erythrorhizos* has reddish roots, the tip of the flower bract acute, not outcurved, and the bract without veins. The spikelet is also more cylindrical than spheric in shape. Unlike *Carex,* the genus *Cyperus* lacks perigynia. Instead, the flower consists of a scale which subtends the stamen and ovary without an enclosing perigynium. The genus *Scirpus* also lacks perigynia, but the flower bracts are spiraled and not 2-ranked.

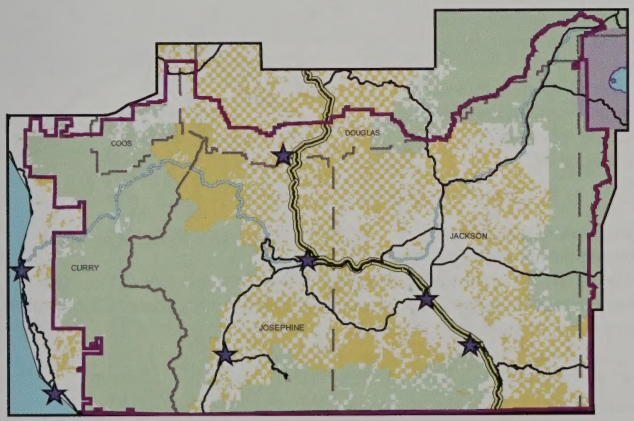
Habitat: Edges of ephemeral pools, ponds, streams or ditches, below 1,200 ft.

Distribution: Klamath Mtns. and Willamette Valley in Jackson, Josephine, Lane, Linn and Marion Cos., Oregon. Historical local sites in Grants Pass and along the Rogue River. Also occurs in Washington, Montana, California and Texas to Georgia, South Dakota and Illinois; Mexico.

References:

Abrams	H&C	HCOT	Jepson
I-258	596	I-346	1139

Dist. JEPS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Code: CYFA

Scientific Name: *Cypripedium fasciculatum* Kellogg ex S. Wats.

Family: Orchidaceae (orchid family)

Common Name: Clustered lady's-slipper

Plant Description: Plant 12-20 cm high. Two elliptical leaves, opposite, 5-13 cm long, 4-7 cm wide, about half way up a hairy stem. Sepals 1.5-2.5 cm long, lip 8-12 mm long.

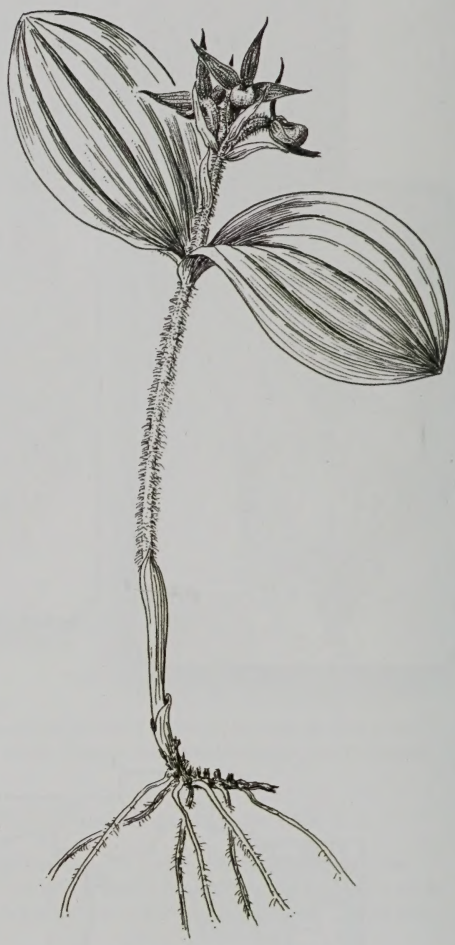
Blooming Period: April - July.

Flower Color: Upper sepals greenish-brown; lateral petals yellowish-green below, purple above.

Distinguishing characteristics: Stem with long, soft, sticky hairs. Leaves without petioles. Sheathing bract near ground level. Flowers in a cluster of 2 to 4. The only *Cypripedium* having leaves that appear opposite.

Similar Species: *Cypripedium montanum* has 1-3 flowers, brown with a white lip; stems multi-leaved, 3-7 dm high; in moist open woods. *C. californicum* has 3-7 flowers, white or rose spotted with brown; stems 2-11 dm high and leafy to the top; in wet habitats. *Listera* species occur in the same habitat but could only be confused if they were not flowering. *Listera* is less hairy, taller and more slender.

Habitat: Open coniferous forest, sometimes with Pacific dogwood (*Cornus nuttallii*), generally on north facing slopes at 1,000-3,500 ft.

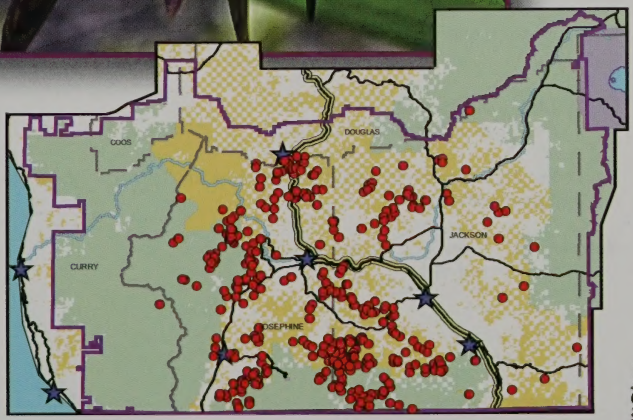


Illus: Hitchcock et al. I-834

Distribution: Widely scattered sites in most western states. In Oregon, known from the southwestern portion of the state and Baker Co. The species occurs most frequently in populations of only 2-7 individuals. Occasionally larger populations occur with more than 50 plants.

References:

Abrams	Eastman	H&C	HCOT	Jepson
I-471	57	700	1-833	1214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Code: DENU

Scientific Name: *Delphinium nudicaule* Torr. & Gray

Family: Ranunculaceae (buttercup family)

Common Name: Red larkspur

Plant Description: Stem generally 15-50 cm; base narrower than root, not firmly attached to root, generally glabrous. Leaves few, mostly basal and long-petioled, lobes 3-10. Flowers few, in a open raceme, on long pedicels, 15-80 mm, 7-50 mm apart. Sepals scarlet to orange-red but can vary with hybrids, forward pointing, lateral 8-16 mm, spur 12-34 mm. Upper petals yellow, tipped with red; lower petals scarcely half the size of upper. Fruit 13-26 mm, curved. Seed wind inflated collar at widest end, otherwise smooth.

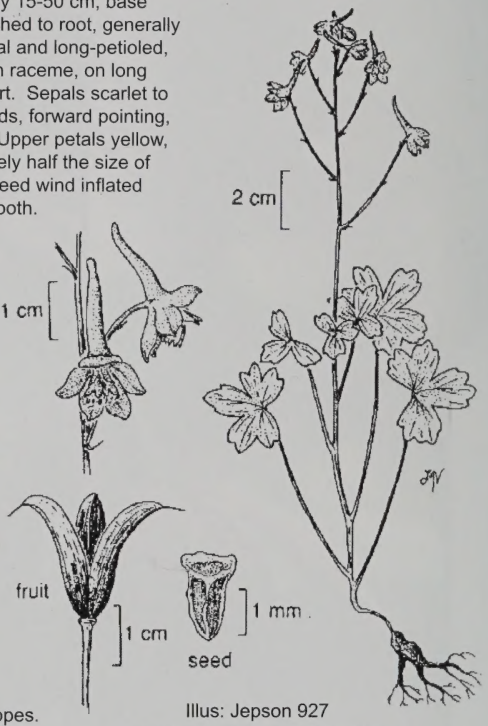
Blooming Period: March - June.

Flower Color: Red (sometimes reddish-yellow).

Distinguishing Characteristics: Bright red color, irregular-shaped flower (upper sepals and 2 upper petals forming a spur).

Similar Species: Other *Delphiniums* in the area blue or purple (some forms may be pink-white). *Dichelostemma ida-maia* (firecracker flower) has a red flower tube, shaped with 6 sac-like swellings.

Habitat: Grows in talus and well-drained gravelley soils on rocky slopes. Exposure often open, or amoung shrubs and woods.



Illus: Jepson 927

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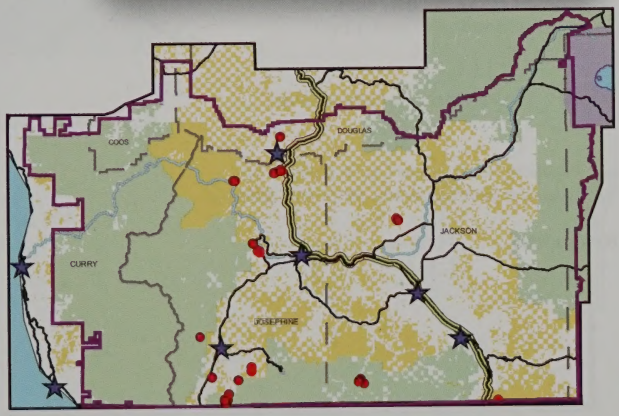
Distribution: Jackson and Josephine Cos., Oregon, also common in California.

Remarks: Hybridizes with most other larkspurs in its range; generally hummingbird pollinated.

References:

Abrams	Jepson
II-182	919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JOSEPHINE

Code: DIPA

Scientific Name: *Dicentra pauciflora* S. Wats.

Family: Papaveraceae (poppy family)

Common Name: Few-flowered bleedinghearts

Plant Description: Plant 3-7 cm; tuberous. Leaves (1-3) basal, 4-6 cm long, three times compound with linear segments. Flowering stem slender and slightly longer than the leaves. Flowers 18-20 mm long, nodding.

Blooming Period: June - July.

Flower Color: White or cream to pink or lavender.

Distinguishing Characteristics: Plant glaucous and small in size. One or few leaves. Leaf segments narrowly linear and acute. Flowers 1-3, flower flattened. Outer 2 petals form sacs at base, reflexed only toward the tip.

Similar Species: *Dicentra uniflora* is similar, but has only one flower, the recurving tips of the outer petals are longer than the body of the petals, and leaflets are rounded, not linear. *D. formosa* is rhizomatous (no tubers). Inflorescence with 4+ flowers, inner petals conspicuously crested. Often has many leaves and grows 20-45 cm tall.

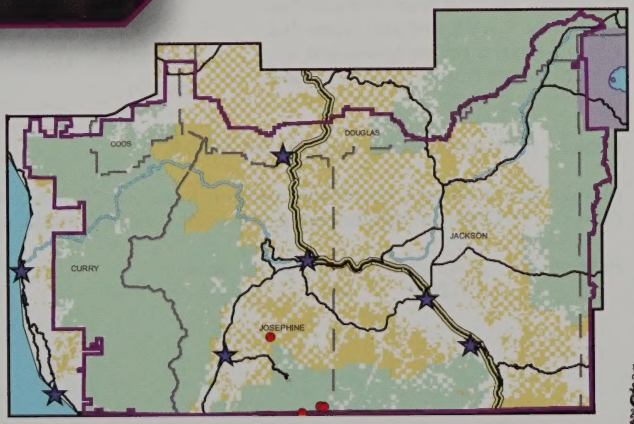
Illus: Abrams II-236

Habitat: Rocky places at higher elevations.

Distribution: Josephine Co. in Oregon and Siskiyou and Sierra Nevada Mtns. in California.

References:

Abrams	Jepson
I-234	812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Code: DRHO

Scientific Name: *Draba howellii* S. Wats.

Family: Brassicaceae (mustard family)

Common Name: Howell's whitlow-grass, Howell's draba

Plant Size: Perennial with tufted sterms. Basal leaves 5-25 mm long. Flowering stems 4-10 cm long, rising high from the rest of the plant; 1-3 bract-like leaves. Flowers 10-30 per inflorescence with petals 4-8 mm long. Seeds 1.2-1.6 mm long. Fruits are generally < 10 per inflorescence and are often hairy.

Blooming Period: July - August.

Flower Color: Yellow.

Distinguishing Characteristics: Leaves in dense clumps, the flowering stems much taller. Leaves covered with dense, stiff stellate (star-shaped hairs), no hairs on margin. Seeds are not winged.

Similar Species: Similar to other *Draba*, but distinguished by tufted leaves and seeds not winged. *D. carnosula* has glabrous leaves except for a few stellate hairs on the margins; seed winged and fruit glabrous. *D. pterosperma* grows on limestone/marble and has tangled hairs on the lower surface of leaves, and has long marginal hairs. *D. aureola*, like *D. howellii*, has unwinged fruit, yellow flowers, and long styles, but differs by having cauline leaves and (typically) more flowers per inflorescence (25-50 versus < 30).

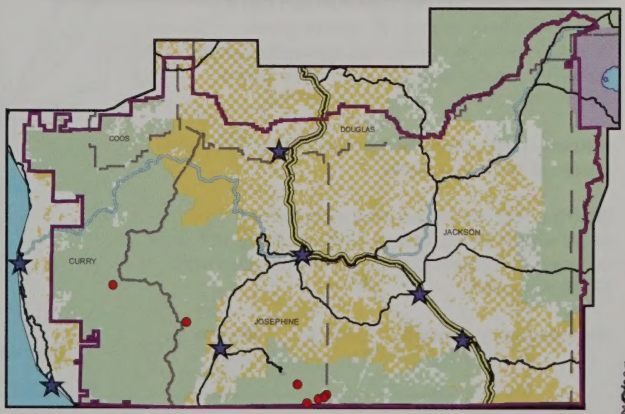
Illus: Abrams II-296

Habitat: North-facing rock crevices, above 4,000 ft.

Distribution: In Oregon, known from southern Josephine Co. and one site in Curry Co. In California, from Del Norte, Humboldt, Siskiyou, Shasta, and Trinity Cos.

References:

Abrams	Eastman	Jepson
II-295	66	418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Code: EPOR2

Scientific Name: *Epilobium oreganum* Greene

Family: Onagraceae (evening primrose family)

Common Name: Oregon willow-herb

Plant Description: Perennial with shoots branching from the base. Stems several, 4-10 dm high. Lanceolate leaves without petioles, 3-9 cm long, 0.5-1.8 cm wide, often with obvious red veins (more apparent when viewing underside of leaf). Petals 7-10 mm long. Fruit 25-45 mm long, widely club-like. Seed is ridged and has white, deciduous hairs.

Lobes of the stigma

Flower and upper half of ovary

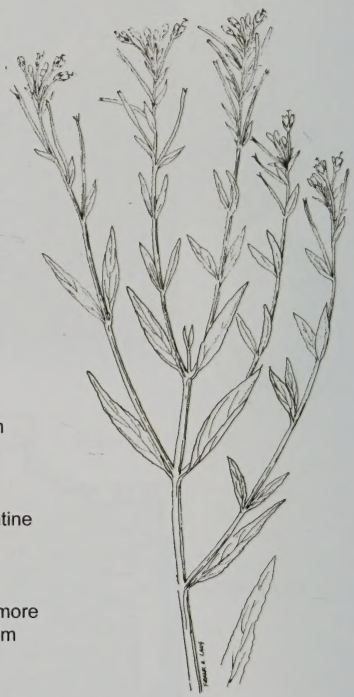
Illus: Meinke 131

Blooming Period: July - September.

Flower Color: Pink to purplish.

Distinguishing Characteristics: Perennial. Plant hairless with a bloom. Leaves finely toothed. Prominent cruciform (4-lobed) white stigma extends beyond the flower.

Similar Species: Similar to many other *Epilobium* in our area; however most are annual, grow in dry habitats, and/or don't have 4-lobed stigmas (club- or head-like instead). Possible confusion might occur due to hybridization within the *Epilobiums*. The annual *E. brachycarpum* occupies dry habitat, or occassionaly the edges of wet areas; it is glandular, more highly branched, 2-20 dm tall, the lower stem peeling, and the stigma 4-parted but not prominently cruciform. *E. ciliolatum* and *E. luteum,* like *E. oreganum,* are perennial and grow in wet habitats. The common *E. ciliatum* ssp. *glandulosum* has a club or head like stigma. *E. luteum* grows in wet habitats but is rare, has light yellow-cream flowers and red, persistent seed hairs; fruit is 35-75 mm long.



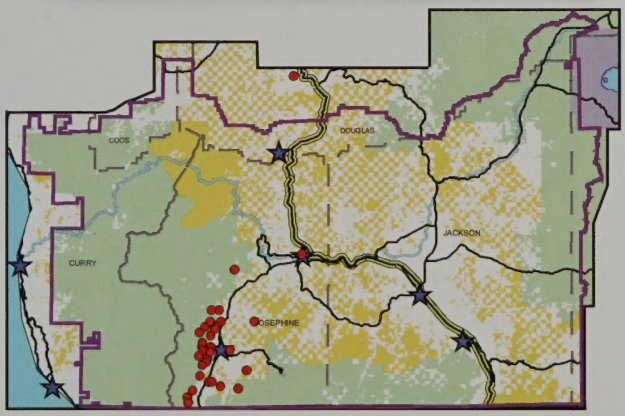
Illus: Meinke 131

Habitat: *Darlingtonia* fens and other wet serpentine places at lower elevations.

Distribution: Scattered sites in Josephine Co. (west side of Illinois Valley), Oregon. Rare, but more common in northern California (nine counties from El Dorado north).

References:

Jepson	Eastman	Meinke
797	71	130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Code: EPSI2

Scientific Name: *Epilobium siskiyouense* (Munz) Hoch & Raven

Family: Onagraceae (evening primrose family)

Common Name: Siskiyou willow-herb

Plant Description: Low perennial, from a much branched, woody base, often forming mats. Stems 0.5-1.5 dm long. Leaves mostly 10-22 mm long, opposite, subacute. Flower tubes 2-2.5 mm long, petals 1-2 cm long. Capsule 2.5-3.5 cm long.

Scaly base of plant

Blooming Period: July - September.

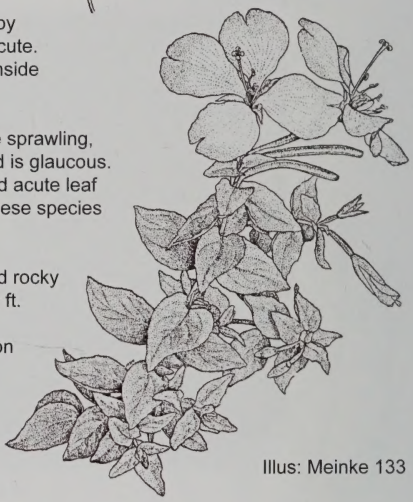
Flower Color: Rose-purple.

Distinguishing Characteristics: Shrubby habit. Leaf shape is broadly ovate and acute. Also look for a small ring of hairy tissue inside the floral tube near the base.

Similar Species: *E. obcordatum* is more sprawling, has smaller leaves, rounded leaf tips, and is glaucous. *E. rigidum* has minute hairs on leaves and acute leaf bases with definite petioles. Neither of these species has the floral tube ring.

Habitat: Boulder fields, rock crevices and rocky slopes on serpentine soils at 5,500-8,200 ft.

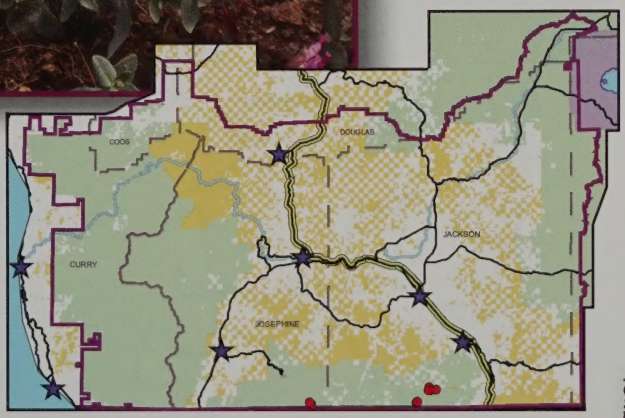
Distribution: In Oregon, found in Jackson and Josephine Cos. Also known from fewer than 20 occurances in Siskiyou and Trinity Cos. in California.



Illus: Meinke 133

References:

Jepson	Meinke
798	132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Code: ERAR27

Scientific Name: *Ericameria arborescens* (Gray) Greene
(***Haplopappus arborescens***)

Family: Asteraceae (sunflower family)

Common Name: Golden fleece

Plant Description: Stout shrub 0.6-3 m high. Leaves narrow 3-6 cm long, up to 2 mm wide, thick. Flower heads with 18-25 disk (tube shaped) flowers. Involucre 4-5 mm high.

Blooming Period: August - November.

Flower Color: Yellow.

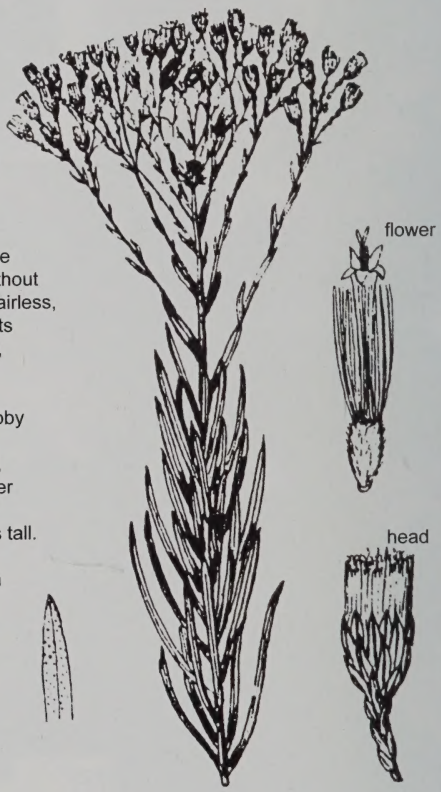
Distinguishing Characteristics: Large shrub. Abundant small flower heads without any ray (petal shaped) flowers. Plant hairless, resinous, covered with sticky pits. Bracts beneath the flower head thin and chaffy, except for a thick midrib.

Similar Species: Similar to other shrubby *Ericameria arborescens* species, but distinguished by its narrow, thick, pitted, crowded leaves, and small rayless flower heads. None of our local shrubby *Ericameria arborescens* species are as tall.

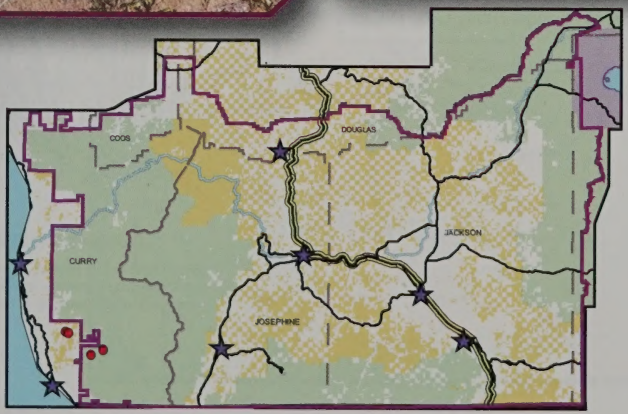
Habitat: Dry foothills, woodlands, open forest, chaparral, 1,200-2,700 ft.

Distribution: Only known in Oregon from three sites in Curry Co. More abundant in California, where it has a wide range.

References: Jepson 252 [*Haplopappus a.*] Abrams IV-288



Illus: Abrams IV-288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Code: ERCE

Scientific Name: *Erigeron cervinus* Greene
(includes *E. delicatus*)

Family: Asteraceae (sunflower family)

Common Name: Siskiyou daisy

Illus: Abrams IV-351

Plant Description: Plant 1.5-3 dm high. Leaves mostly basal, 4-12 cm long and 12 mm wide (stem leaves few and slightly smaller). Flower heads 1-4; 20-45 ray flowers (petal shaped), 7-10 mm long; disk flowers (tube shaped) 3.5-5 mm long.

Blooming Period: May - August.

Flower Color: Ray flowers pale blue or lavender to whitish; disk flowers yellow.

Distinguishing Characteristics: Plant hairless up to just under the flower heads. Leaves mostly basal, simple, and relatively large.

Similar Species: Similar to many *Erigeron*, but distinguished by simple, relatively large leaves and bracts under the flower head without long hairs. Similar to *E. cascadensis*, which has very white ray flowers.

Habitat: In rocky places or crevices on solid rock. Also open areas, medium to high elevations and sometimes in glaciated areas. Also occurs along streambanks at lower elevations, usually near seeps or vernally wet spots.

Distribution: Siskiyou Mtns. of Curry and Josephine Cos. in Oregon, and from Del Norte, Siskiyou, and Trinity Cos. in California.

References:

Jepson	Abrams	Meinke
257	IV-352	138 [*E. delicatus*]

Illus: Jepson 263

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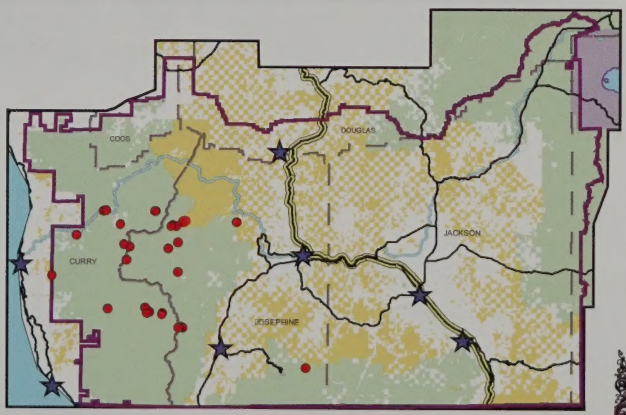
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Code: ERPEV

Scientific Name: *Erigeron petrophilus* **var.** *viscidulus* Greene

Family: Asteraceae (sunflower family)

Common Name: Cliff daisy

Plant Description: Stems branching from a woody root crown, 1-3 dm high. Leaves 2-4 cm long and 2-5 mm wide. Flower head 10-15 mm wide. Involucre 5-9 mm high with glandular (sticky) hairs. Bracts overlapping, firm, greenish with a brown midrib. Disk flowers (tube shaped) 4.5-6.5 mm long.

Blooming Period: July - September.

Flower Color: Yellow to reddish.

Distinguishing Characteristics: Ray flowers absent. Stems very leafy, leaves hairy and much longer than internodes. Hairy involucres.

Similar Species: Similar to *E. inornatus,* which has a more or less hairless involucre and leaves up to 5 cm long.

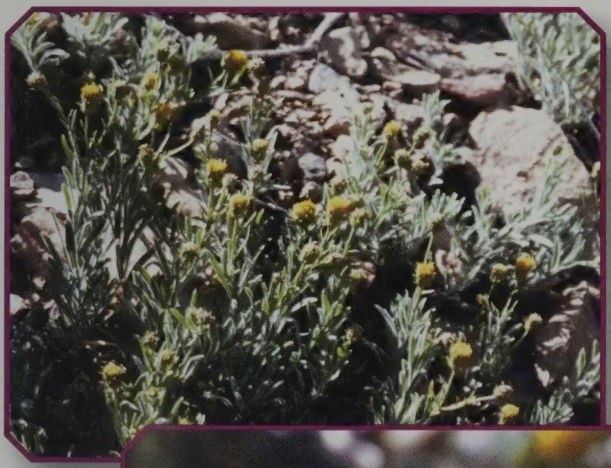
Habitat: High elevation, serpentine slopes and cliffs (but has been found on other substrates).

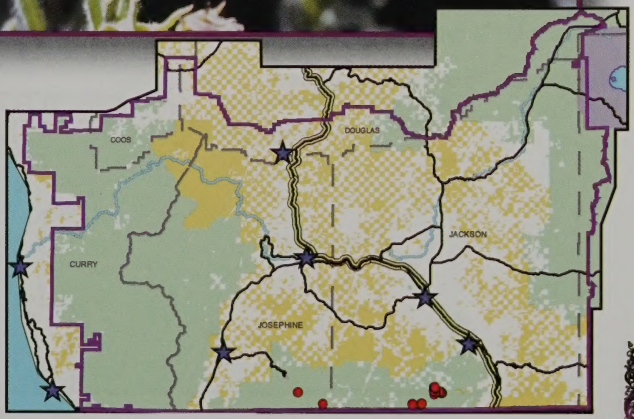
Distribution: In Oregon, known only from Jackson and Josephine Cos. In California, found in the Klamath Mtn. Range to the south Coast Range.

Illus: Abrams IV-373

References:

Abrams	Jepson
IV-371	260

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Code: ERLO2

Scientific Name: *Eriogonum lobbii* Torr. & Gray

Family: Polygonaceae (buckwheat family)

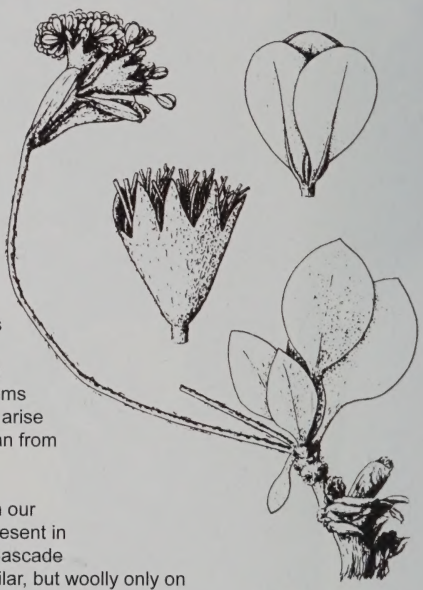
Common Name: Lobb's buckwheat

Plant Description: Short, stout, woody stems 3-15 cm long; rounded leaves, 2-5 cm long, forming rosettes at end of branches. Inflorescence densely umbel-like, bracts leaf-like. Flower stalks 6-20 cm long, decumbent. Fruit 5-8 mm.

Blooming Period: June - August.

Flower Color: White or pinkish, often turning deep rose with age.

Distinguishing Characteristics: Low plants with relatively large leaves. Leaves densely tomentose, especially on the underside. Dead leaf bases often present under the current live ones. Flowering stems prostrate, flat on the ground, appearing to arise from under or among the leaves rather than from above them. Involucre lobes reflexed.



Illus: Abrams II-32

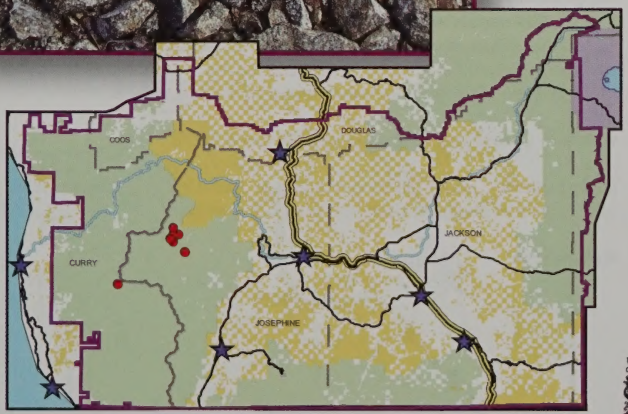
Similar Species: No other Eriogonums in our area have these features. *E. pyrifolium* present in the southern Oregon/northern California Cascade Mtns., but not from the Klamath Mtns; similar, but woolly only on the underside of the leaves, and has short erect involucre lobes.

Habitat: Gravelly ridges and talus slopes at moderate to high elevations. Not generally found on serpentine soils.

Distribution: In Oregon, only known from the mountains of Silver and Indigo Creek watersheds, and the Big Craggies within Curry and Josephine Cos. Common in Sierra Nevada and Klamath Mtns. of California (including the Red Buttes Wilderness).

References:

Abrams	Jepson
II-27	874
	[*E. l.* var. *lobbii*]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Code: ERMA5

Scientific Name: *Erodium macrophyllum* Hook. & Am.

Family: Geraniaceae (geranium family)

Common Name: Large-leaved filaree, large-leaved storksbill

Plant Description: Annual. Stem scapose, less than 5 cm, glandular-puberulent. Leaf simple, reniform, crenate to shallowly lobed, puberulent, 10-15 cm. Sepals 8-10 mm, petals greater than sepals, generally white, tinged red to purple. Fruit body 8-10 mm, tip truncate, puberulent, pit roundish, no furrow.

Blooming Period: March - May.

Flower Color: White, sometimes red-purple tinged.

Distinguishing Characteristics: Simple reniform basal leaves with a white flower tinged red to purple. Like other storkbills, a bill-like awn attached to each seed coils and straightens in response to moisture; this can effectively drill the seed into the ground with fluctuating moisture levels.

Illus: Abrams III-6

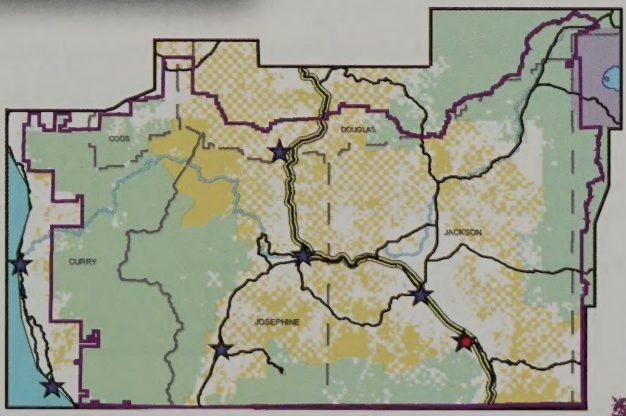
Similar Species: *E. cicutarium* is a ubiquitous weed of open areas and grasslands; distinguished by the pinnately compound lower leaves and reddish to lavender flowers. *E. cicutarium* also has smaller sepals and petals with the petals about the same size as the sepals (3-5 mm). *E. bothrys* differs in possessing deeply lobed leaves and lavender flowers. Other less common species have lobed or palmate leaves. Members of the genus *Geranium* have more stamens (10) and palmately lobed or divided leaves.

Habitat: Grasslands and open sites below 4,000 ft.

Distribution: Thought to be extirpated in Jackson Co., Oregon. Rare in California, also occurs in southern Utah and northern Mexico.

References:

Abrams	Jepson
III-5	672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Code: ERHO10

Scientific Name: *Erythronium howellii* S. Wats.

Family: Liliaceae (lily family)

Common Name: Howell's adder's-tongue, Howell's fawn-lily

Plant Description: Plant 1-2 dm high. Leaves mottled with white, 8-15 cm long, 15-40 mm wide. Petals 20-22 mm long. Stigma entire or with a tiny headlike lobe < 1 mm. Filaments are slender (< 0.8 mm wide) and round in x-section. Corm 3-4 cm long.

Blooming Period: March - May.

Flower Color: White to pale yellow with an orange base, tinged pink with age.

Distinguishing Characteristics: Inner flower petals without sac-like appendages. Except *E. multiscapoideum*, *E. howellii* is the only *Erythronium* that does not have these appendages, anthers white or cream with very slender filaments, style short and stigma not divided at tip, or less than 1 mm.

Similar Species: *E. citrinum* is very similar, but has an appendage on the inner petal and bases of the petals narrower. *E. oreganum* has a divided style, and has been found growing in mixed populations with *E. citrinum* (Rough and Ready Creek). *E. oreganum* has wider filaments (> 1.5 mm wide) that are flat at the bases, and large stigma lobes (4-6 mm).

Illus: Abrams I-430

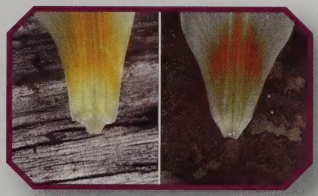
Habitat: In open woods, often on serpentine soils or in ecotonal areas.

Distribution: Jackson Co. and south end of Illinois Valley in Josephine Co., Oregon; south to Trinity Mtns., California.

Remarks: Jepson lists *E. howellii* under *E. citrinum.* However, ONHP, CNPS and federal agencies in southern Oregon maintain this taxon as a distinct species, since the two usually occur in different ranges, and because of the difference in the appendage on the petal.

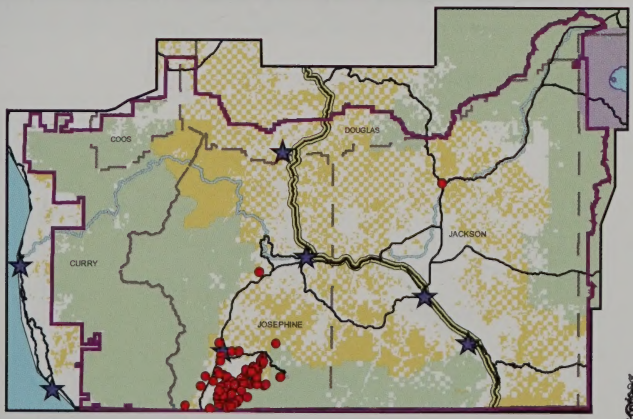
References:

Abrams	Eastman	Jepson
I-430	77	1193 [*E. citrinum*]



E. citrinum (with appendages)

E. howellii (lacking appendages)



Code: ESCA

Scientific Name: *Eschscholzia caespitosa* Benth.

Family: Papaveraceae (poppy family)

Common Name: Gold poppy

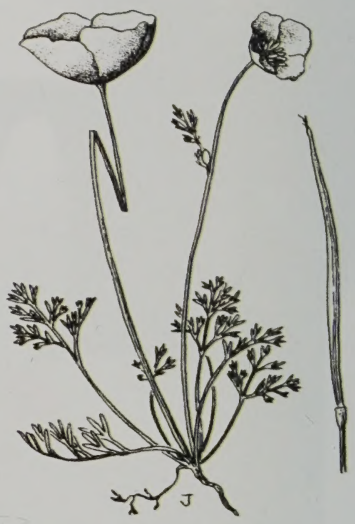
Plant Description: Annual, flower stems 1-3 dm high, branching at the base from a tuft of basal leaves. Petals 1-2.5 cm long. Capsule 5-8 cm long. Populations typically consist of many plants.

Blooming Period: March - June.

Flower Color: Bright, clear yellow.

Distinguishing Characteristics: Receptacle without or with a very narrow spreading rim (< 2.5mm wide overall). Plants hair-less or with a few short, bristly hairs.

Similar Species: *Eschscholzia californica* (California poppy) is similar, but has a receptacle with a double rim, the inner erect and translucent, the outer with a widely spreading rim; rims are up to 5 mm wide. Usually a perennial, but can be an annual, and grows up to 60 cm. Petals are generally 2-6 cm.

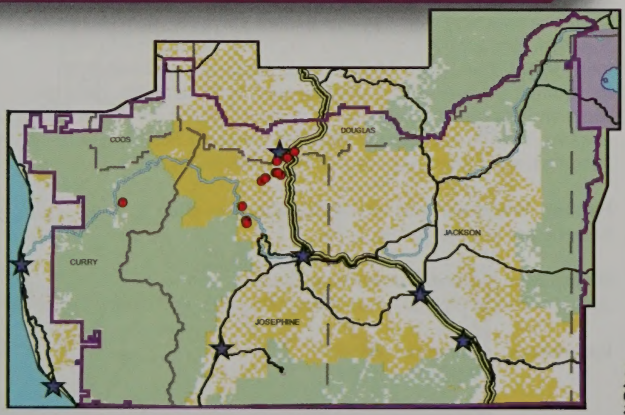


Illus: Abrams II-229

Habitat: Dry flats and brushy slopes below 3,500 ft.

Distribution: Known in Oregon from Curry, Josephine and Douglas Cos. Also throughout California except for Great Basin and Desert Provinces.

References: Abrams II-227 Jepson 814


COOS
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JOSEPHINE

Code: FEEL2

Scientific Name: *Festuca elmeri* Scribn. and Merr.

Family: Poaceae (grass family)

Common Name: Elmer's fescue

Plant Description: Perennial; stems 4-10 dm tall, glabrous, clustered. Leaves flat (or loosely rolled), scabrous or hairy above, 1-4 dm, 2-6 mm wide. Panicle 10-20 cm long, open, the branches mostly in pairs. Spikelets 3 or 4-flowered, 7-11 mm; glume without hairs, the lower 2-4 mm, the upper 3-4.5 mm; florets 2-6; lemma 5.5-7 mm, very scabrous; awn 2-5 mm, subterminal from between two short teeth.

Illus: Abrams I-222

Blooming Period: May - June.

Distinguishing Characteristics: Typical fescue heads, but not a bunchgrass and leaves are soft, flat. Well-developed awn; awn subterminal between two short teeth. Lemma distinctly 5-nerved, scabrous, short lemma base without hairs.

Similar Species: Most native upland *Festuca* spp. in the area have narrow, rolled leaves. *F. subulata* is most like *F. elmeri* but it is a wetland species and the tip of the lemma does not have two short teeth. *F. subuliflora* has long lemma bases, with a tuft of hair, the awn is crinkly (not straight) and 10-15 mm; grows in deep shade in conifer forests. *F. arundinaceae* and *F. pratensis* have leaf blades with prominent basal lobes, and somewhat clasping stems. Other genera may also be mistaken for *F. elmeri*; *Bromus carinatus* has a very hairy, closed sheath and has much larger floral parts. Melicas have paper-like, somewhat transparent glumes. Some species, such as *M. subulata*, have no awns and have an onion-like basal bulb. All *Melica* spp. have closed sheaths. All *Poa* spp. are awnless, many have a closed sheath and/or rhizomes, and generally have pinched, prow-like leaf tips.

Illus: Jepson 1265

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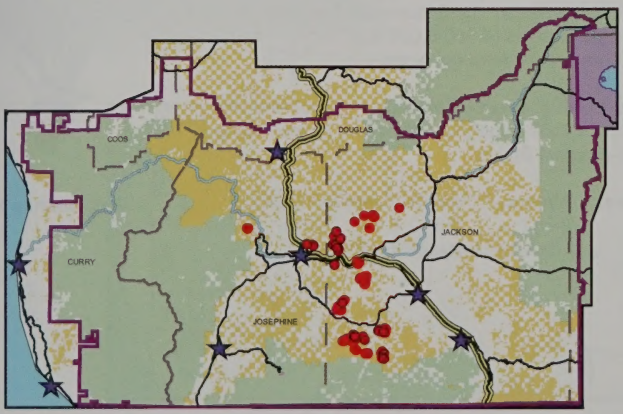
Habitat: Wooded slopes; dry woods with oaks often present, not in deep shade.

Distribution: Found in Josephine, Douglas, and Jackson Cos. in Oregon. Also in Klamath Mtns. and central Coast Range of California.

References: Abrams I-222; Jepson 1260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CURRY
JOSEPHINE

Code: FRUM2

Scientific Name: *Frasera umpquaensis* Peck & Applegate

Family: Gentianaceae (gentian family)

Common Name: Umpqua swertia

Plant Description: Plant 3-14 dm high, glabrous. Basal leaves whorled, 15-20 cm long and 5-8 cm wide; stem leaves long stalked and gradually reduced up the stem. Dense terminal panicle 10-20 cm long; pedicels erect, 3-10 mm long; calyx 8-12 mm, deeply 4-lobed into linear to oblong segments; corolla 8-12 mm, 4-lobed, each lobe with a single round gland bordered by a fringed membrane.

Blooming Period: June - August.

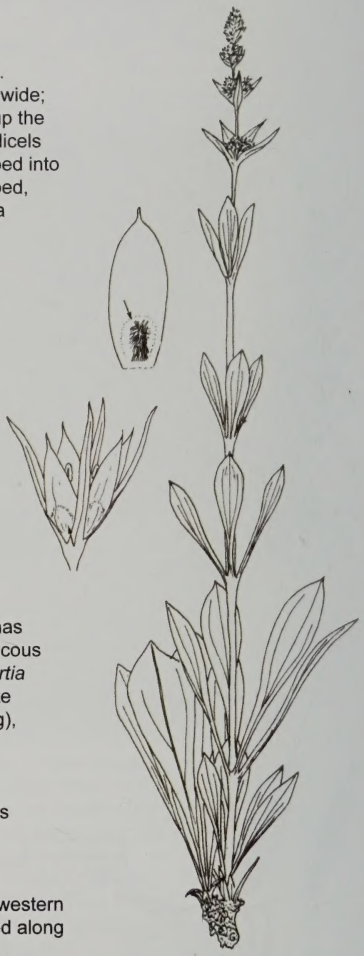
Flower Color: Corolla pale yellow-green or slightly bluish.

Distinguishing Characteristics: Plants without hairs; stems erect, usually solitary, stout, hollow. Long stalked basal leaves oblanceolate to broadly spoon-shaped; stem leaves whorled, egg shaped to elliptic, 3-5 per whorl. Calyx 4-parted, lobes deeply cleft, segments linear to oblong. Corolla scarcely as long, 4-lobed with 1 fringed gland per lobe (each petal has a single fringed gland at the base).

Similar Species: *F. speciosa (Swertia radiata)* has 2 glands per corolla lobe. Stems and leaves glaucous or short-hairy under handlens. *F. albicaulis (Swertia albicaulis)* has white-margined stems and opposite (not whorled) stem leaves narrower (linear-oblong), and plant much shorter (to 7 dm vs 11+ dm).

Habitat: Open woods or at edges of meadows. In mid to upper elevation true fir dominated forests or mixed conifer forests (4,000-6,000 ft.), generally in partial shade or openings.

Distribution: Northwestern California and southwestern Oregon. About 75% of the populations are located along the Rogue-Umpqua Divide.

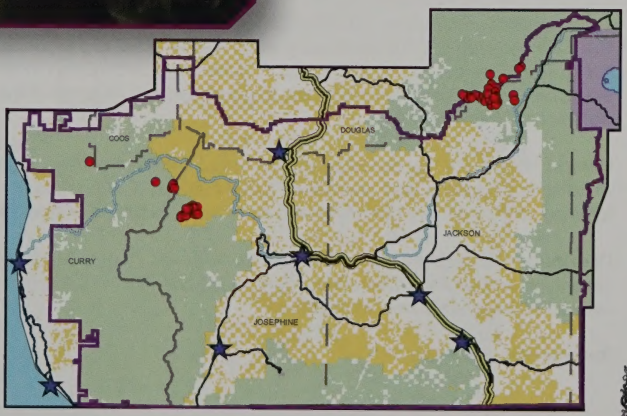


Illus: Meinke 157

References:

Abrams	Meinke	Jepson	Eastman
II-362	156	670	80

[.. *Swertia umpq* ..] [*S. fastigiata*]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Code: FRGE

Scientific Name: *Fritillaria gentneri* Gilkey

Family: Liliaceae (lily family)

Common Name: Gentner's fritillaria

Plant Description: Perennial from fleshy bulb, robust stem about 5-7 dm high, glaucous, sometimes purple mottled. Leaves lanceolate, 3-5 to a whorl, 7-15 cm long, 0.7-1.5 cm wide at base, often whorled. Flowers solitary or sometimes in bracted racemes, flower is overall campanulate in shape, perianth parts reflexed at the tip, but not strongly recurved. Glands generally half the length of tepals. Style generally divided 1/2 way. Fruit a capsule, truncate to rounded apex, truncate to slightly cordate base, broadly winged, wings dentate.

Illus: Meinke 159

Blooming Period: March - July.

Flower Color: Reddish purple with pale yellow streaks.

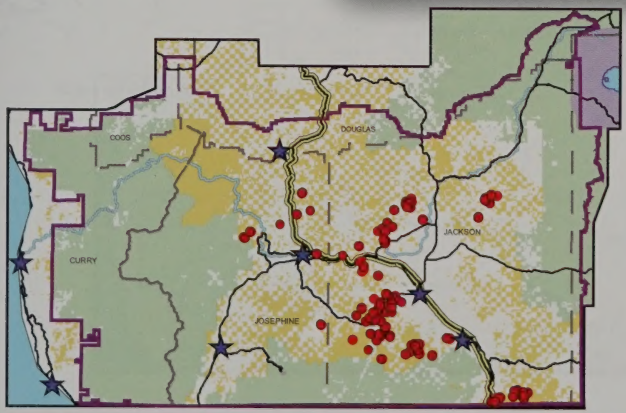
Distinguishing Characteristics: Style split nearly halfway and tepals not strongly recurved. Conspicuous glands 12-18 mm (± = 1/2 the length of the perianth parts).

Similar Species: *F. recurva*, the only other red-checkered *Fritillaria* in our area, has perianth parts that are a lighter red (but can be still checkered with yellow) and recurved when mature. Overall, flower more tubular/funnelform. Style divided usually 1/4 – 1/3, rarely to 1/2. Gland usually much less than 1/2 of the perianth part length. Stem not as stout and leaves not as large as *F. gentneri*. *F. affinis* also exhibits yellow mottling on the tepals, but the base color is brown to purple brown. All three of these species are occasionally found together.

Habitat: Open, dry low-elevation sites in mixed oak-madrone woodlands, ponderosa pine woodlands, chaparral, and grasslands 1,000-5,000 ft. Often found in ecotones between forested sites and more open habitats, and often associated with shrubs.

Distribution: Scattered locations in the Illinois River, Rogue, and Klamath drainages; Josephine and Jackson Cos., Oregon. Also Siskiyou Co., in California just south of the Cascade-Siskiyou National Monument.

References: Meinke 158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Code: FRGL

Scientific Name: *Fritillaria glauca* Greene

Family: Liliaceae (lily family)

Common Name: Siskiyou fritillaria

Plant Description: Bulb; large scales 3-9, small scales 1-9. Stem 8-20 cm long. Leaves 2-4, thick, stiff, keeled and arched, alternate, 3.5-9 cm long and 5-14 mm wide. Petals 15-25 mm long, 6-9 mm wide. Stamens 12 mm long. Fruit widely winged.

Blooming Period: April - July.

Flower Color: Purplish or greenish marked with yellow.

Distinguishing Characteristics: Leaves 2-4, arising on the stem near the soil surface. Leaves fleshy, folded at the midrib, and sickle-shaped. Style cleft to the middle.

Similar Species: Similar to other *Fritillaria* with mottled flower color, but distinguished by small size (less than 20 cm) and waxy bloom on leaves and stems.

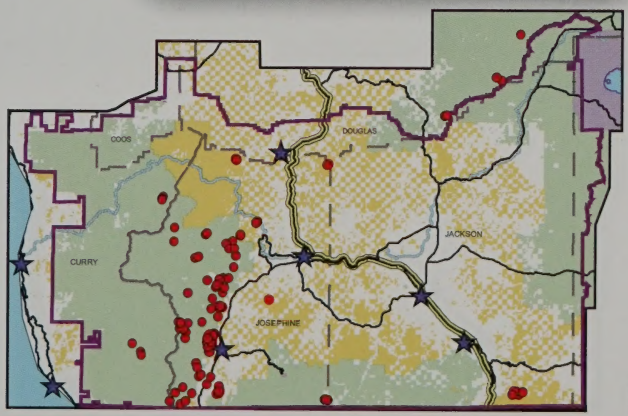
Habitat: Gravelly serpentine slopes and ridges.

Distribution: Southern Douglas Co. south through the Siskiyou Mtns. of Jackson, Josephine, and Curry Cos. in Oregon. Also ranges into northern California.

References:

Abrams	Eastman	Jepson
I-424	83	1195

Illus: Abrams I-424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Code: FRPU3

Scientific Name: *Fritillaria purdyi* Eastw.

Family: Liliaceae (lily family)

Common Name: Purdy's fritillary

Plant Description: Stem 1-4 dm. Basal leaves 2-10, 2.5-10 cm; 3 or 4 alternate cauline leaves. Flower perianth 1.5-3 cm.

Blooming Period: March - June.

Flower Color: White with purple spots or lines and pink shading.

Distinguishing Characteristics: Style obviously 3-cleft, stigmas linear. Leaves mostly crowded near ground level, ovate, not deeply folded or falcate. Flowers horizontal or nodding. Flowers with a tuft of short whitish hairs on the sepal tips. Capsules not winged.

Similar Species: *F. lanceolata* and *F. atropurpurea* have leaves on upper stem, well above the ground. *F. glauca* and *F. falcata* have deeply folded, usually falcate leaves and no white in the flowers.

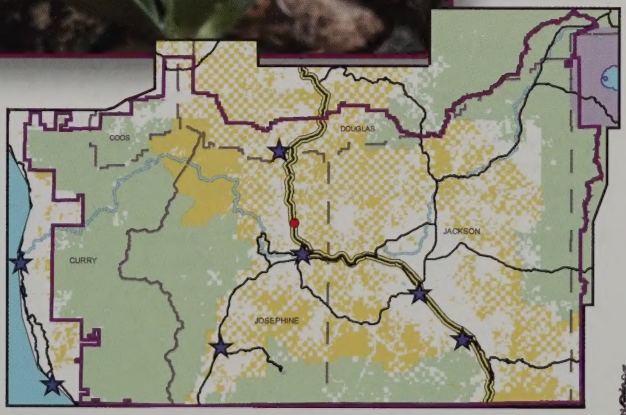
Illus: Abrams I-422

Habitat: Dry, serpentine slopes and ridges.

Distribution: One small disjunct population on Walker Mtn. (northeast of Merlin), Josephine Co. Oregon. Also known from inner north Coast Range of California.

References:

Abrams	Jepson
I-422	1196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Code: GENE

Scientific Name: *Gentiana newberryi* Gray

Family: Gentianaceae (gentian family)

Common Name: Newberry's gentian

Plant Description: Stems somewhat decumbent, arising laterally, below rosette, 0.5-10 cm high. Spoon-shaped leaves 2-7 cm long including the broad petiole, the upper leaves sessile. Flowers solitary, sessile in the axils of the upper most pair of leaves. Corolla 23-55 mm, lobes 7-17 mm. Calyx tube 10-30 mm long. Sinus appendages deeply divided into 2 triangular, serrate-jagged parts tapered to thread-like points.

Illus: Abrams III-357

Blooming Period: July - Sept.

Flower Color: Pale blue to deep purple lobes, with dark bands outside, white with greenish spots within.

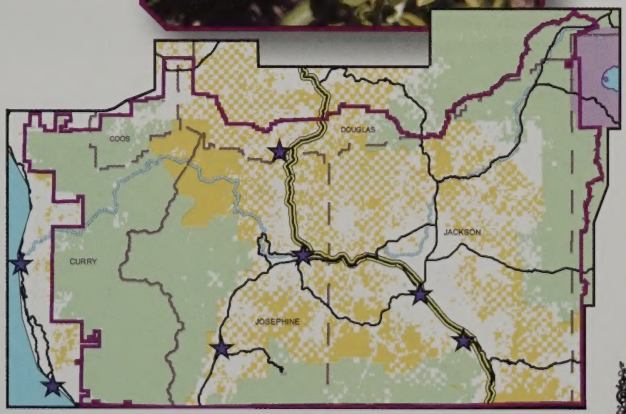
Distinguishing Characteristics: Alpine plant, 0.5-10 (23) cm high. Thick, large basal leaves, and prominent taproot. Field observations indicate corolla sinus appendages long, but not drawn into fine hairs as in *G. setigera* and *G. plurisetosa,* although this finding not supported in Jepson.

Similar Species: *G. setigera's* upper to middle stem leaves less than the length between internodes, while *G. newberryi* leaves generally greater. *G. calycosa* does not have prominent basal leaves or taproot.

Habitat: Subalpine wet meadows between 3,500-6,500 ft.

Distribution: Three Sisters area of the Cascade Mtns. and southern Oregon; Deschutes, Klamath and Lane Cos. in Oregon. Located adjacent to Oregon border in the Red Buttes Wilderness and west of Cook and Green Pass. Also ranges south to Sierra Nevada Mtns. in California and western Nevada.

References:	Abrams	Eastman	H&C	Jepson
	III-356	84	356	668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Code: GEPL6

Scientific Name: *Gentiana plurisetosa* C.T. Mason

Family: Gentianaceae (gentian family)

Common Name: Bristly gentian, elegant gentian

Plant Description: Stems form caudex, 5-40 cm. Generally no basal leaves, cauline leaves evenly spaced, 12-60 mm long, 7-38 mm wide, base sheaths at mid-stem generally greater than 5 mm. Flowers 1-5, calyx 17-25 (35) mm, corolla 35-50 mm with lobes 7-14 mm.

Blooming Period: July - September.

Flower Color: Deep blue.

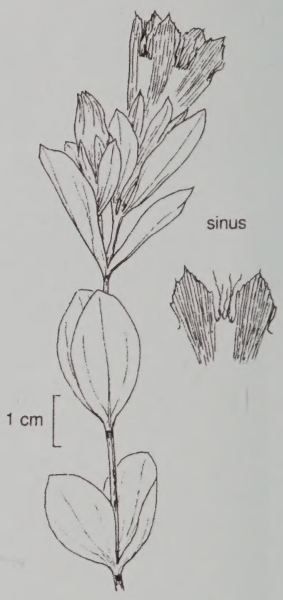
Distinguishing Characteristics: Perennial. Stems decumbent to erect, arising terminally from caudex. Leaves opposite, cauline, elliptic to round, tips obtuse to acute; upper pair of leaves almost concealing flowers. Inflorescence terminal. Corolla sinus appendages divided more or less to base into several thread-like parts.

Similar Species: *G. setigera* has an obvious basal rosette of leaves 28-85 mm, cauline leaves narrower than *G. plurisetosa*, and found only in serpentine wetlands. *G. newberryi* has a smaller corolla (25-35 mm), leaves in a basal rosette and few, smaller, upper cauline leaves. *S. calycosa* has sinus appendages divided only 1/2 way to base into 2 triangular parts, thread-like only toward the tip.

Habitat: Wet mountain meadows on granitic soils, 3,900-6,200 ft.

Distribution: Josephine Co. in Oregon to Del Norte, Humboldt, Siskiyou, and Trinity Cos. in California.

References: Jepson
669



Illus: Jepson 671

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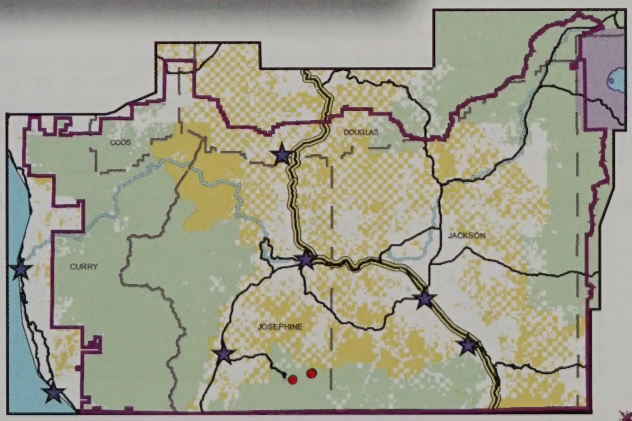
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Code: GESE2

Scientific Name: *Gentiana setigera* Gray
(***G. bisetaea***)

Family: Gentianaceae (gentian family)

Common Name: Waldo gentian

Plant Description: 1-3 decumbent stems, 20-45 cm high, arising laterally below rosette. Basal leaves, spoon-shaped/obovate, 2.5 to 6 cm long, 0.5-15 cm wide. Cauline leaves reduced, narrower, more elliptic-oblong and do not conceal the flowers. Flowers 1-4; calyx 2.5-3 cm long; corolla 3-5 cm long.

Illus: Abrams III-357

Blooming Period: July - September.

Flower Color: Deep blue.

Distinguishing Characteristics: Habitat (see below). Basal rosette of leaves. Flowers usually one (to several) at apex of stem; corolla lobes finely and irregularly toothed; sinus appendages deeply divided into 2-3 thread-like parts, about equalling the length of the corolla lobes.

Similar Species: *G. plurisetosa* is similar, but leaves rounder and upper leaves almost conceal the flower, stems erect or ascending, basal rosette of leaves are poorly developed. Opten, *G. plurisetosa* is found only on granitic or dioritic substrate, wet meadows and bogs at higher elevations. *G. newberryi* has a basal rosette and stems arise laterally from caudex, as seen in *G. setigera*, but stems shorter (gen < 1 dm). Stem leaves denser (lvs > internodes vs lvs < internodes in *G. setigera*), and corolla appendages each divided into two short, jagged triangles that end in short, tooth-like threads. *G. affinis* and *G. calycosa* generally have 3 or more stems arising terminally from a caudex, and have no basal rosette. In addition, corolla appendages each made up of 2 triangular parts that terminate into a short thread.

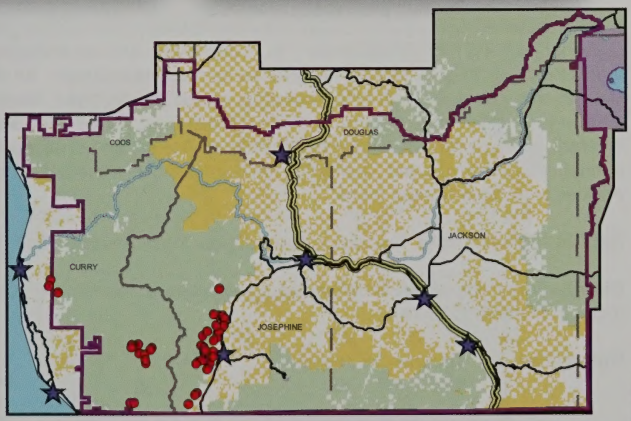
Habitat: Serpentine wet meadows and bogs, seeps on slopes at low elevations.

Distribution: Siskiyou Mtns. of Curry and Josephine Cos. in southwestern Oregon, and in northern California (around Gasquet Mtn.); one disjunct population at Red Mtn. in Humboldt Co., California.

References:

Abrams	Eastman	Jepson	Meinke
III-358	84	669	160

[.....*G. bisetaea*.....]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Code: HABE

Scientific Name: *Hackelia bella* (J.F. Macbr.) I.M. Johnston.

Family: Boraginaceae (borage family)

Common Name: Beautiful stickseed

Plant Description: Stems erect, 5-7 dm high, from a woody root. Leaf caudex often many, 15–26 cm, narrow-elliptic; lower cauline 8–13 cm, ephemeral; mid to upper cauline 4–10 cm, lanceolate to ovate, bases cordate, subclasping. Corolla limb approximately 12-19 mm wide; appendages mostly longer than wide. Calyx lobes generally 4-5 mm, appendages generally longer than wide, limb 12–19 mm wide; stigma 1. Inflorescence a coiled cyme. Nutlet prickles mainly marginal; facial ones are much shorter and fewer than marginal ones.

Illus: Abrams III - 556

Blooming Period:
June - early August.

Flower Color: White.

Distinguishing Characteristics: A perennial forget-me-knot with large white flowers with appendages near the base of each petal lobe, generally longer than wide, and nutlets with barbed prickles. These prickles smaller on the face than on the margins.

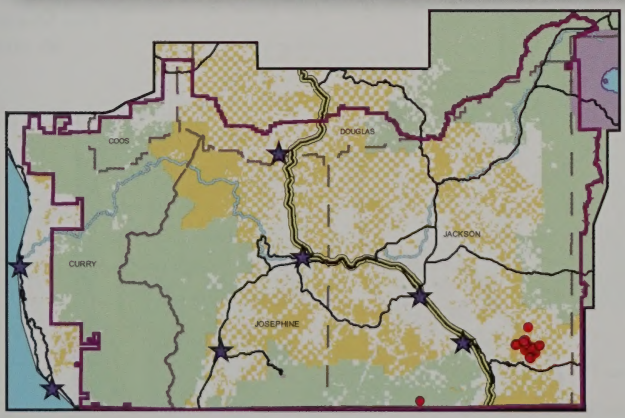
Similar Species: *H. californica* also has white flowers, but they are generally smaller (calyx lobes ~ 2-3 mm; corolla limbs ~ 5-14 mm wide), and appendages are mostly wider than long. Nutlets generally evenly prickled on margins and face. All other *Hackelia* likely to be in this area have flowers of other colors (mostly blue). Many have nutlets with smaller facial prickles, compared to those on their margins, but they are not as drastically different as those of *H. bella*. *Lappula* has white flowers and similar nutlets, but it is an annual. *Plagiobothrys* and *Cryptantha* have small flowers and nutlets either with no prickles or prickles without barbs.

Habitat: Stream banks, roadsides, open slopes, forest openings 3,000 - 6,000 ft.

Distribution: Klamath Mtns and western Cascades in Jackson Co., Oregon. Also found in northern California.

References:

Abrams	Jepson
III-553	380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Code: HAAT

Scientific Name: *Hastingsia bracteosa* S. Wats.
var. *atropurpurea* (Becking) F. Lang & P. Zika
(*Hastingsia bracteosa*)

Family: Liliaceae (lily family)

Common Name: Purple flowered rush-lily

Plant Description: Stem 4-9 dm tall, 1-3 leaves, 2.5-5 dm long and 3-7 mm wide. Inflorescence 2-3 dm long. Perianth segments 10-12 mm long; bracts below flowers 7-11 mm long, thread-like stamens 1/2 - 2/3 as long. Capsule8-10 mm long; seeds about 3 mm long.

Blooming Period: May - June.

Flower Color: Purple.

Distinguishing Characteristics: Purple flower color. Long stem topped with a mostly unbranched raceme of flowers.

Similar Species: *Hastingsia bracteosa* var. *bracteosa* has white flowers and is found mostly in the northern part of the Illinois Valley. Perianth segments 10-12 mm, bracts 7-11 mm. *H. album* has white to yellowish flowers with shorter perianth segments, only 6-7 mm long, tapered, shorter leaves and less conspicuous bracts, only 2-3 mm long.

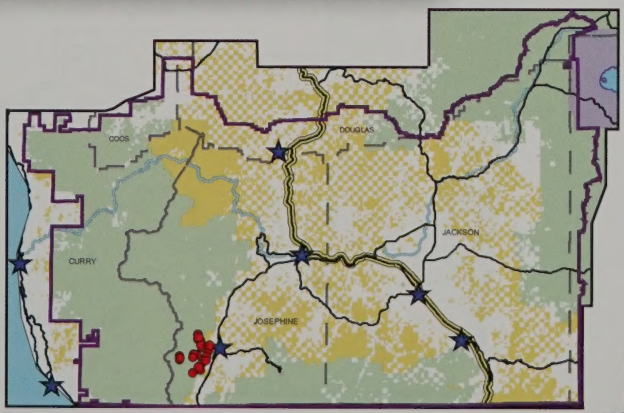
Habitat: Wet meadows, rocky seeps, serpentine *Darlingtonia* fens at lower elevations, often in open areas on gentle slopes.

Distribution: Limited range; southern end of the Illinois Valley in Josephine Co., Oregon.

References:

Abrams	Eastman	Meinke
I-413	87	288
	[*S. bracteosum*]	

Illus: Meinke 289
sp. only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Code: HABR5

Scientific Name: *Hastingsia bracteosa* S.Wats **var.** ***bracteosa***
(*Hastingsia bracteosa*)

Family: Liliaceae (lily family)

Common Name: Large-flowered rush-lily

Plant Description: Stem 4-9 dm tall, 1-3 leaves, 2.5-5 dm long and 3-7 mm wide. Inflorescence 2-3 dm long. Tepals 10-12 mm long; bracts below flowers 7-11 mm long, thread-like stamens 1/2-2/3 as long. Capsule 8-10 mm long; seeds about 3 mm long.

Blooming Period: May - June.

Flower Color: White.

Distinguishing Characteristics: White flower color. Long stem topped with a mostly unbranched raceme of flowers.

Similar Species: *Hastingsia bracteosa* var. *atropurpurea* has purple flowers and is found mostly in the southern-most populations within the Illinois Valley. *H. album* has petals only 6-7 mm long, tapered, shorter leaves and less conspicuous bracts, only 2-3 mm long.

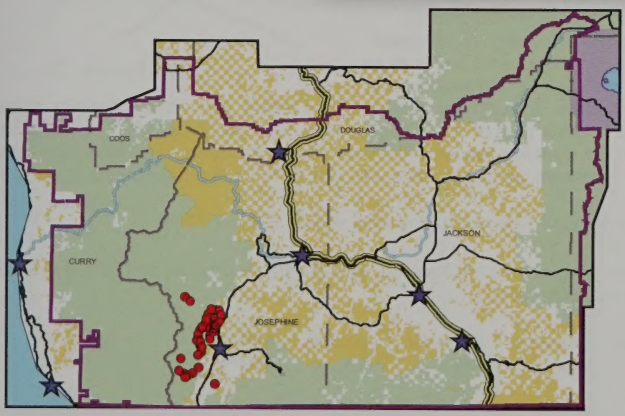
Habitat: Wet meadows, rocky seeps, serpentine *Darlingtonia* fens at lower elevations, often in open areas on gentle slopes.

Distribution: Limited range; northern end of the Illinois Valley, in Josephine Co., Oregon.

References:

Abrams	Eastman	Meinke
I-413	88	288
	[*S. bracteosum*]	

Illus: Meinke 289
sp. only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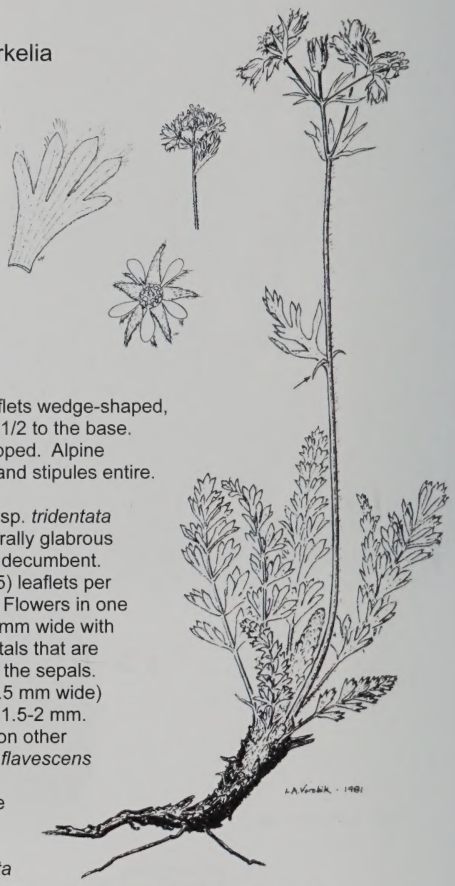
Code: HOHE2

Scientific Name: *Horkelia hendersonii* T.J. Howell

Family: Rosaceae (rose family)

Common Name: Henderson's horkelia

Plant Description: Matted perennial with several stems from a woody base, 10-20 cm high. Leaves silky, 3-8 cm long, leaflets 10-20, cleft, 2-10 mm long, stipules entire. Inflorescence is dense and flat-topped, 5-20 flowered; pedicels 1-7 mm. White-pink petals nearly equaling the 4 mm rose-colored calyx lobes.



Illus: Meinke 173

Blooming Period: June - August.

Flower Color: White or pink.

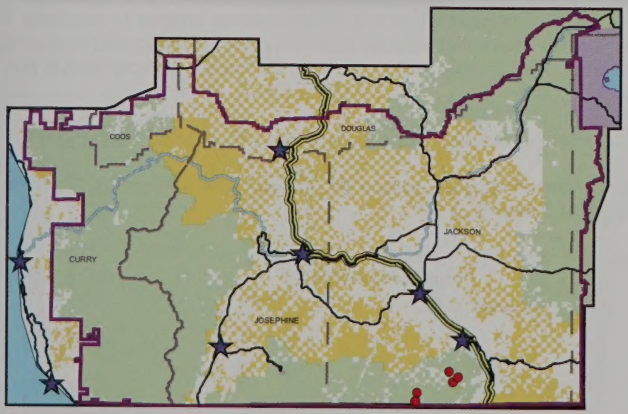
Distinguishing Characteristics: Leaflets wedge-shaped, usually 5-toothed, and usually toothed 1/2 to the base. Inflorescence dense and mostly flat topped. Alpine habitat, herbage densely silky-villous, and stipules entire.

Similar Species: *Horkelia tridentata* ssp. *tridentata* grows tufted or in a rosette, stem generally glabrous (rarely sparsely glandular) and usually decumbent. Leaves pinnately compound with 2-4 (5) leaflets per side; each leaflet ± 3-toothed at apex. Flowers in one to many headlike clusters; flowers 4-7 mm wide with narrowly oblanceolate (often linear) petals that are equal to or barely exceed the length of the sepals. Hypanthium 1-2 x wider than long (2-3.5 mm wide) and has a glabrous inner wall. Fruit is 1.5-2 mm. Grows on granitic soils but also found on other igneous substrates. *H. tridentata.* var. *flavescens* usually has one flower cluster; flowers 6-10 mm wide with widely oblanceolate petals that are often < sepals; inner hypanthium wall hairy, fruit 2-2.5 mm. Grows on serpentine soils. *H. congesta* has densely glandular stems and is more erect. Leaflets have up to 5 teeth at tips. Petals are widely obovate. *H. fusca* has wedge-shaped petals; 3-15 leaflets per side of leaf, each more than 3-toothed at tips. Other species, such as *H. daucifolia*, *sericata*, and *hendersonii*, have inflorescences either very open or flat-topped (cyme-looking), and leaves with 5 or more leaflets per side with 5 or more teeth (or deeply lobed) at tips.

Habitat: Dry granitic flats and rubbly talus slopes, 6,000-7,000 ft.

Distribution: Known from Mt. Ashland, Jackson Co. in Oregon, and from one California occurrence in Siskiyou Co.

References:	Abrams	Eastman	Jepson	Meinke
	II-419	91	95	172


COOS
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JOSEPHINE

Code: HOTRT

Scientific Name: *Horkelia tridentata* Torr. **ssp.** ***tridentata***

Family: Rosaceae (rose family)

Common Name: Three-toothed horkelia

Plant Description: Tufted or in a rosette. Stem decumbent, glabrous to rarely sparsely glandular. Leaves pinnately compound with 2-4 (5) leaflets per side, leaflet generally 3-toothed. Inflorescence head-like clusters, 3-40 flowers. Flowers, 4-7 mm wide, petals narrowly lanceolate to linear, equal to or just exceed sepal length. Hypanthium with glabrous inner wall, 1-2 x wider than long, 2-3.5 mm wide. Fruit achene, 1.5-2 mm.

Blooming Period: May - June.

Flower Color: White.

Distinguishing Characteristics: Lateral leaflets 2-4 on each side. Plant ususally decumbant. Petals narrowly oblanceolate, generally equal or greater than the sepals, hypanthium generally 2 to 3.5 mm wide, inner wall generally glabrous.

Illus: Abrams II-421

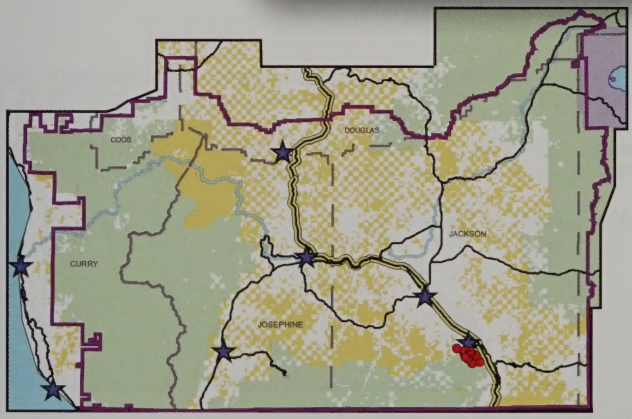
Similar Species: *Horkelia tridentata* ssp. *flavescens* usually has only one flower cluster. Flowers 6-10 mm wide with widely oblanceolate petals, often < sepals. Inner hypanthium wall hairy. Fruit 2-2.5 mm, and often occurs on serpentine-influenced soils. *H. congesta* has densely glandular stems and grows more erect. Leaflets have up to 5 teeth at tips, and petals widely obovate. *H. fusca* has wedge-shaped petals and 3-15 leaflets per side of leaf, each more than 3-toothed at the tips. Other species, such as *H. daucifolia, H. sericata,* and *H. hendersonii*, have inflorescences either very open or flat-topped (cyme-looking) and have leaves with 5 or more leaflets per side, that have 5 or more teeth at tips, or are deeply lobed.

Habitat: Dry, open coniferous forest on granitic or igneous soils, 1,000-8,000 ft.

Distribution: Klamath Mtns. in Jackson Co., Oregon; Cascade Range, Sierra Nevada, Modoc Plateau in California.

References:

Abrams	Jepson
421	957
[sp. only]	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Code: ILBA

Scientific Name: *Iliamna bakeri* (Jepson) Wiggins

Family: Malvaceae (mallow family)

Common Name: Baker's globe-mallow

Plant Description: Herbaceous with a woody base (caudex), tall - mostly 3-10 dm high (occasional larger when vigorous). Several stems; stems and leaves with star-shaped hairs. Leaves 1-4.5 cm long and at least the upper are shallowly 3-lobed; leaf petiole 1-6 cm, stout. Flowers solitary or in 2-3 clusters between stem and leaf, showy. Involucel bracts linear, 5-8 mm. Flower petals 1-3 cm, calyx 9-12 mm; with filaments fused around the style. Seeds 3-4 per fruit segment, segment bristly on back.

Blooming Period: July - August.

Flower Color: Rose-purple (to lavender).

Distinguishing Characteristics: Tall plant (3-10 dm), with upper leaves shallowly 3-lobed and 1-4 cm broad. Additional characteristics of the *Iliamna* genus include fruit segment bur-like and dehiscent, stigmas obliqued-squared, and 3 persistent bractlets under the inflorescence.

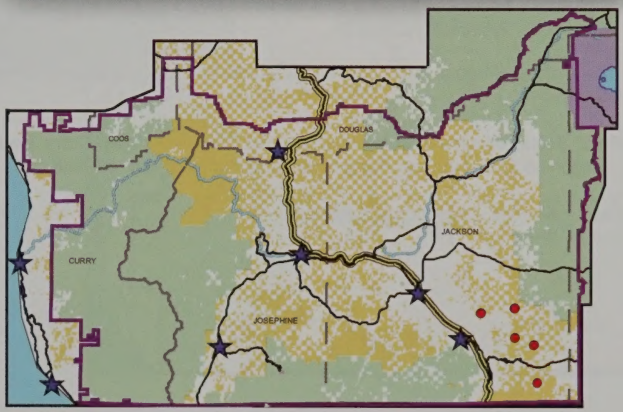
Similar Species: *Iliamna latibracteata* is taller at 10-20 dm; its upper leaves are deeply 5-7 lobed and 8-20 cm wide. *I. latibracteata* has 2-3 seeds per fruit segment, while *I. bakeri* has 3-4 seeds per fruit segment.

Illus:Abrams III-89

Habitat: Rocky slopes and chaparral, mountain slopes, juniper woodlands, and lava beds, from 3,000 - 7,500 ft.

Distribution: Klamath Mtns. in Jackson and Klamath Cos., Oregon. West Cascades and Modoc Plateau in Lassen, Modoc, Shasta, and possibly Siskiyou Cos., California.

References: Abrams III-86 Jepson 751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Code: ILLA2

Scientific Name: *Iliamna latibracteata* Wiggins

Family: Malvaceae (mallow family)

Common Name: California globe-mallow

Plant Description: Shrub 10-20 dm high. Leaves 8-20 cm wide and long; petioles 5-14 cm long, stipules 6-10 mm. Inflorescence sometimes appearing as a crowded raceme. Involucel bractlets ovate to elliptical-lanceolate, 10-14 mm. Calyx 8-10 mm long, the lobes 5-8 mm wide. Petals 2-3 cm long; filaments are fused around the style. Each fruit segment has 2-3 seeds.

Blooming Period: June - July.

Flower Color: Rose to lavender with purple base.

Distinguishing Characteristics: The 5-7 lobed leaves are green above and covered with white or grayish stellate (star-shaped) hairs beneath. Showy flowers crowded in spike-like clusters.

Similar Species: *I. bakeri* is similar, but with leaves shallowly 3-lobed. Thimbleberry (*Rubus parviflorus*)is superficially similar, but stamen filaments not fused into a tube surrounding the style, as found in plants of the *Malvaceae* family.

Illus: Abrams III-89

Habitat: Moist sites, streamsides in coniferous forests. Often on shady, disturbed ground 200-6,000 ft.

Distribution: Scattered sites throughout southwest Oregon in Coos, Curry, Douglas, Jackson, Josephine and Linn Cos. Ranges south to Humboldt Co. in California.

References:

Abrams	Jepson	Eastman
III-86	751	94

COOS
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CURRY
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Code: KELE

Scientific Name: *Keckiella lemmonii* (Gray) Straw

Family: Schrophulariaceae (figwort family)

Common Name: Bush beardtongue

Plant Description: Woody (pithy) shrub with clustered stems 5-15 dm tall, young stems wand-like, herbage bright green. Leaves opposite; leaf blade wedge-shaped, margins generally toothed, 10-65 mm long. Inflorescence large and open, the long branches bearing small clusters of flowers; calyx 3.5-6.7 mm long; corolla 11-15 mm, the upper lip arched and 2.6-6 mm long; the staminode (sterile modified stamen) densely yellow-hairy and exserted.

Blooming Period: June - August.

Flower Color: Purplish-brown, lower lip pale yellow with dark lines.

Distinguishing Characteristics: Woody (pithy) shrub, stems round. Calyx segments mostly free (not connected); corolla not spurred, upper flower lip hooded/arched. One staminode.

Similar Species: *Keckiella corymbosa* has red flowers, larger than those of *K. lemmonii*. Differs from *Penstemon* species in that *K. lemmonii* has fertile filament bases that are densely hairy and attached to the corolla at one level. Can also resemble *Scrophularia*, particularly when not flowering, or in the winter.

Habitat: Rocky slopes, coniferous and mixed forests, chaparral, 600-6,000 ft.

Distribution: Klamath Mtns. in Jackson and Josephine Cos., Oregon; also found in California and Nevada.

References:

Abrams	Jepson
*III-769	1034

* listed as *Penstemon lemmonii*

Illus: Jepson 1035

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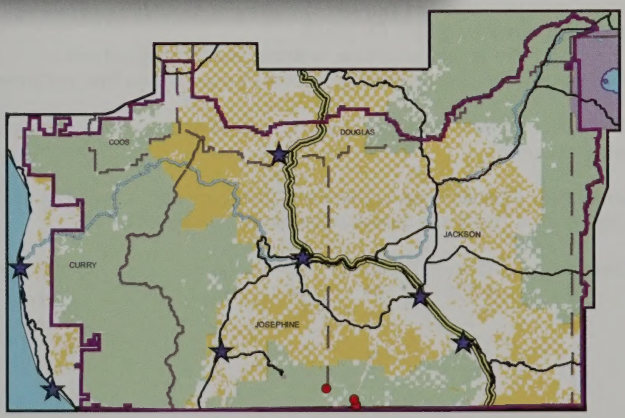
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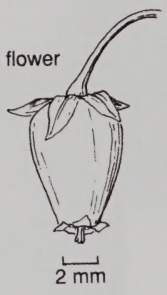
Code: LEDA

Scientific Name: *Leucothoe davisiae* Torr. ex Gray

Family: Ericaceae (heath family)

Common Name: Sierra laurel, western leucothoe

Plant Description: Evergreen shrub up to 1.5 m tall. Leaf oblong to elliptic, leathery, stiff, glabrous, margin serrate to entire, 1-6 cm. Inflorescence in upper leaf axil, panicles terminal, 5-15 cm; many-flowered, flowers nodding, urn-shaped, 5-6 mm; bractlets basal, pedicels recurved. If awns are present on anther, rudimentary. Capsule loculicidal, less than 8 cm wide.



Illus: Jepson 565

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Blooming Period: June - August.

Flower Color: White.

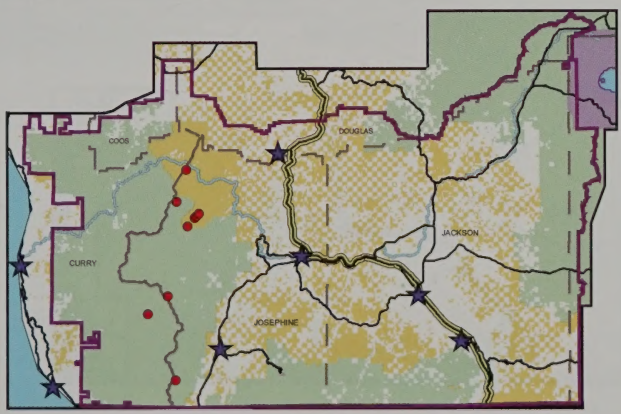
Distinguishing Characteristics: The leathery leaves often have an upraised habit. Inflorescence a raceme in upper leaf axil. Flowers urn-shaped, and rudimentary awns may be present on anthers. Fruit loculicidal.

Similar Species: *Ledum glandulosum*, a similar evergreen shrub that occurs in the same habitat. Leaf has resinous, fragrant margins; margins entire and may be rolled under. Look for sessile flat glands on the finely hairy leaf undersurface. Inflorescence flat-topped and dense with white to cream-yellow petals, petals more or less free, not urn-shaped.

Habitat: Moist draws and edges of springs, ponds and riparian areas in mixed evergreen forests.

Distribution: Klamath Mtns. in Curry and Josephine Cos., Oregon. Also in California, from Lassen Peak in Trinity and Siskiyou Cos. south to Fresno Co.

References: Abrams III-306; Jepson 561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JOSEPHINE

Code: LELE8

Scientific Name: *Lewisia leana* (Porter) Robinson

Family: Portulacaceae (purslane family)

Common Name: Lee's lewisia

Plant Description: Plants 1-2 dm high, with 1-4 leafless flowering stems. Basal leaves in dense rosette, linear and fleshy, 2-6 cm long, glaucous. Flower pedicels 3-15 mm long. Sepals 2, toothed, about 2 mm long. Petals 5-6.5 mm long.

Blooming Period: July - August.

Flower Color: Red, pink-purple, or white with red veins.

Distinguishing Characteristics: Leaves crowded, slender and succulent. Many flowers on stem. Sepals with dark glands on the teeth.

Similar Species: None (similar to *L. columbiana,* which does not occur in this area).

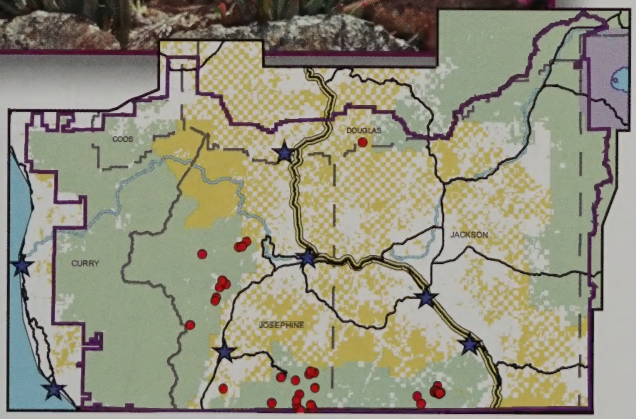
Habitat: Rocky or gravelly ridges or benches at higher elevations, often on serpentine soils.

Distribution: Klamath Mtns. in Curry, Douglas, Josephine and Jackson Cos. in Oregon, and northern California in Yolla Bolly Mtns., Trinity and Siskiyou Cos. south to subalpine areas in Fresno Co.

Illus: Abrams II-136

References:

Abrams	Jepson	Eastman
II-133	903	102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Code: LIKE2

Scientific Name: *Lilium kelloggii* Purdy

Family: Liliaceae (lily family)

Common Name: Kellogg's lily

Plant Description: Plants less than 2 m high. Leaves whorled, 6-16 cm long and 1-2 cm wide. Flowers, many per stem (1-27); tepals 3-8 cm long, strongly recurved. Capsules 3-6 cm.

Blooming Period: July - September.

Flower Color: Pink or white, with purple dots and yellow midrib.

Distinguishing Characteristics: Dry habitat. Flower pendent (hanging vertically), fragrant, and has distinctive color pattern.

Similar Species: No other lilies have this combination of features.

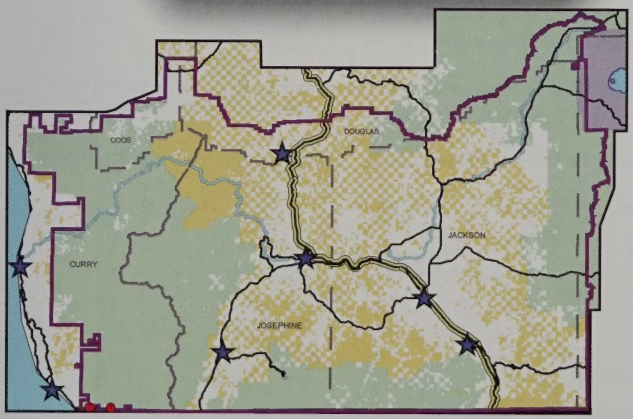
Habitat: Dry woods, gaps and roadsides in coniferous forests, redwood forests, or brushfields below 3,500 ft.

Illus: P. Fong

Distribution: Only one reported site in region, just over the state line in Curry Co., Oregon. Historic site from 1970's in Del Norte Co., California, above Collier Tunnel on old Hwy 199. Possibly in Klamath Co., Oregon. Also occurs in Del Norte and Humboldt Cos. in California.

References:

Abrams	Jepson	Eastman
I-417	1199	104
[*L. rubescens*]		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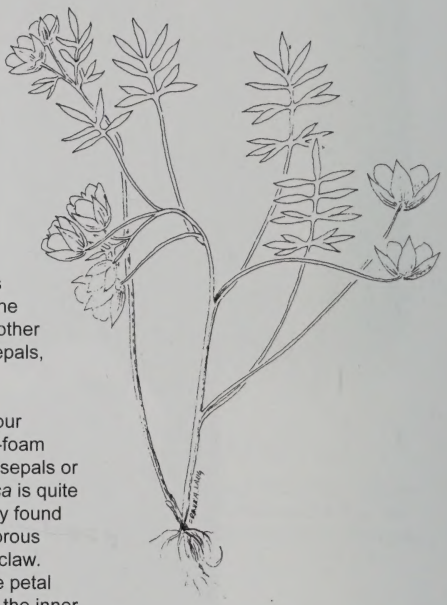
Code: LIFLB

Scientific Name: *Limnanthes floccosa* T.J. Howell
ssp. *bellingeriana* (M.E. Peck) Arroyo

Family: Limnanthaceae (meadowfoam family)

Common Name: Bellinger's meadow-foam

Plant Description: Low-growing annual, stems glabrous and 7.5-15 cm long, leaves pinnately divided into 5 or 7 segments. Flowers glabrous-sparsely pilose, rounded, urn-shaped, petals equal to or shorter than sepals; petals 5.5-7.5 mm, sepals 5.5-7.5 mm.



Illus: Meinke 201

Blooming Period: March - May.

Flower Color: White.

Distinguishing Characteristics: This is the only (mostly) glabrous subspecies. The flower is more strongly urn-shaped than other subspecies, petals are not longer than sepals, and styles are united only at base.

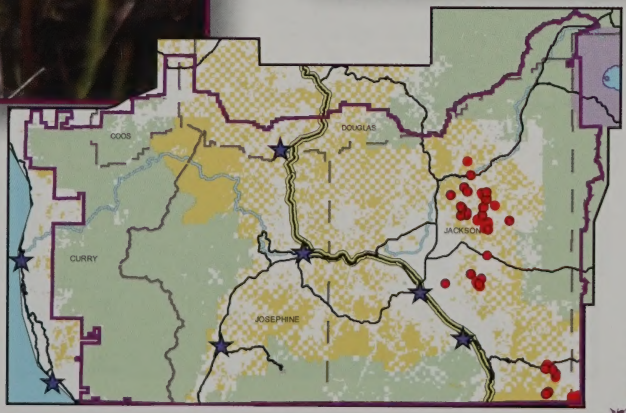
Similar Species: Vernally wet areas in our region provide habitat for many meadow-foam flowers. All other subspecies have hairy sepals or petals. *Limnanthes floccosa* ssp. *floccosa* is quite woolly overall, while *L. f.* ssp. *pumila*, only found on Upper and Lower Table Rocks, is glabrous except for two rows of hairs on the petal claw. *L. f.* ssp. *grandiflora* also has hairs on the petal claw, in addition to some pubescence on the inner surface of the sepals. A different species, *L. gracilis* var. *gracilis*, is glabrous, but petals 2 times longer than sepals. *L. douglasii* ssp. *douglasii* has yellowish petals with white tips generally longer than the sepals. Both *L. f.* ssp. *floccosa* and *L. f.* ssp. *bellingeriana* are highly autogamous (self-pollinated). This trait helps maintain genetic isolation between the two subspecies when they grow together in the same habitat.

Habitat: Full sun in vernally wet meadows or vernal pools, generally found on basalt scablands at 1,000-4,000 ft. Sometimes observed growing on gopher mounds.

Distribution: Jackson and Klamath Cos. in Oregon; Shasta Co. in California.

References:

Meinke	Jepson
200	738
	sp. only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JOSEPHINE

Code: LIFLG3

Scientific Name: *Limnanthes floccosa* T.J. Howell
ssp. *grandiflora* Arroyo

Family: Limnanthaceae (meadowfoam family)

Common Name: Big-flowered wooly meadow-form

Plant Description: Low annual, 5-15 cm, pubescence sparse on stems and leaves. Flowers pubescent, especially the calyx; petals with two lines of pubescence on claws, 7.5 -9.5 mm long; filaments 4.5-5 mm long, anthers less than 1 mm.

Blooming Period: April - May.

Flower Color: White.

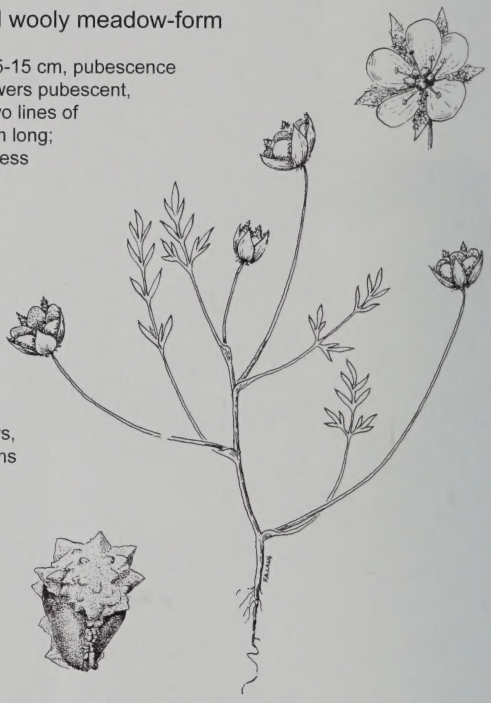
Distinguishing Characteristics: Distinguished from other species of *Limnanthes* by the woolly calyx pubescence and from other subspecies of *L. floccosa* by the two lines of hairs on the petal claws, the sparse pubescence of the stems and leaves, and the larger corolla.

Similar Species: Noted in the "Similar Species" section of *L. floccosa* ssp. *bellingeriana*, p. 168.

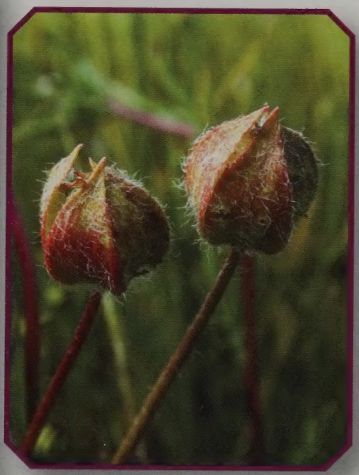
Habitat: Edge of vernal pools, generally near the wetter, inner edges (as opposed to the drier outer fringes where ssp. *floccosa* is associated), elevations 1,000 to 1,200 ft.

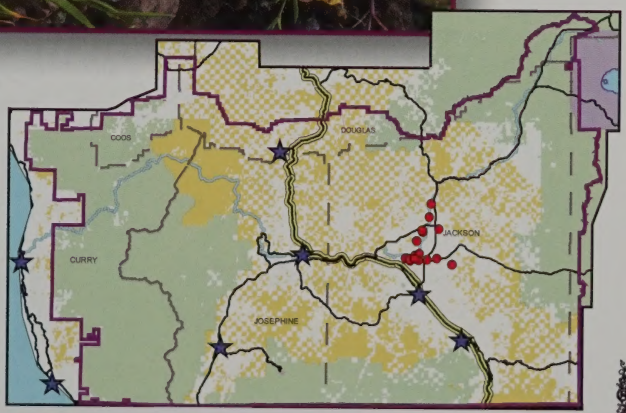
Distribution: Agate Desert region of Jackson Co., Oregon.

References: Meinke 202



Illus: Meinke 202




COOS
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JOSEPHINE

Code: LIFLP2

Scientific Name: *Limnanthes floccosa* T.J. Howell
ssp. *pumila* (T.J. Howell) Arroyo

Family: Limnanthaceae (meadowfoam family)

Common Name: Dwarf woolly meadow-form

Plant Description: Annual, glabrous, stems simple to sparingly branched near base, 5-10 cm high. Lower leaves 3-4 cm long, pinnately divided into 5-9 divisions, entire or sometimes the lower 3-lobed. Sepals 7.5-8 cm long; pistils are 3-5 mm. Each flower produces 3-5 nutlets. Nutlets ovoid, regose below, crowned with short conic processes at apex.

Illus: Meinke 205

Blooming Period: March - April.

Flower Color: White

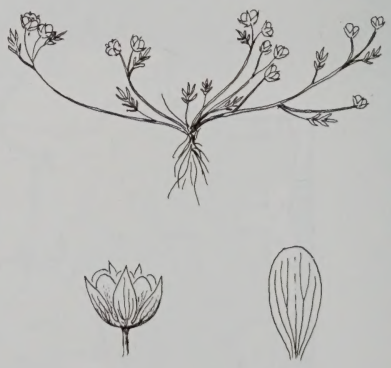
Distinguishing Characteristics: Differs from the other subspecies of *L. floccosa* by its combination of glabrous foliage and sepals, and flower petals with hairs. Petals approximately equal the sepals in length.

Similar Species: *Limnanthes floccosa* ssp. *bellingeriana* also has glabrous foliage and sepals, but petals glabrous and 5.5-7.5 mm. Sepals 5.5-7.5 mm, pistils 2.3-2.5 mm, and not found on Table Rocks. All other *L.f.* subspecies have densely hairy sepals and foliage (except ssp. *grandiflora* has sparse foliage hairs). *L. douglasii* ssp. *douglasii* has yellowish petals that are generally longer than the sepals and reflex as fruit matures. *L. floccosa* ssp. have petals that incurve and ± cover fruit. *L. gracilis* var. *gracilis* has petals 2x as long as sepals.

Habitat: At the edges of deep vernal pools, which dry by mid summer; generally in full sun.

Distribution: Found only on Table Rocks, Jackson Co., Oregon.

References: Meinke 204



Illus: Meinke 205

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JOSEPHINE

Code: LIGRG2

Scientific Name: *Limnanthes gracilis* T.J. Howell **var.** *gracilis*

Family: Limnanthaceae (meadowform family)

Common Name: Slender meadow-foam

Plant Description: Annual, glabrous throughout, stems 8-10 cm long. Leaves fern-like, 3-5 cm long, with a long petiole, and deeply divided into 5-9 segments. Primary leaf segments entire or three-parted. Flowers cup-shaped; petals 10-14 mm long, with 2 rows of hairs at the base; sepals 4-8 mm long. Petals curve over the fruit as it matures. Nutlets have thin, scarious, scale-like tubercles.

Illus: Meinke 207

Blooming Period: March - May.

Flower Color: White with yellowish base, turning pink to lilac with age.

Distinguishing Characteristics: Petals 2 times longer than sepals. Sepals not hairy. Primary leaf segments entire or 3-parted.

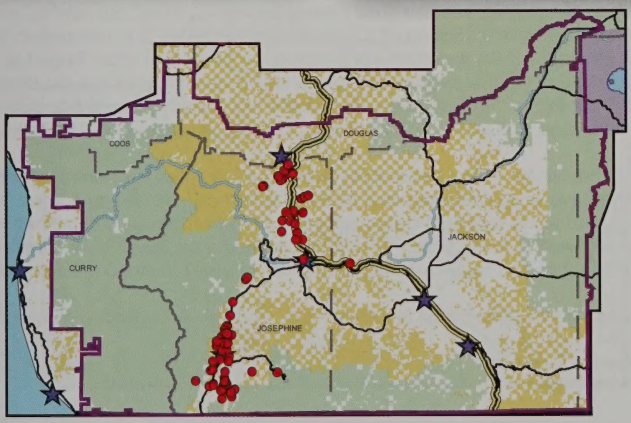
Similar Species: Only variety occurring in Oregon. Distinguished from the *L. flocossa* group, which all have petals equaling, or not exceeding, the sepals and most subspecies have hairs of varying degrees. *L. gracilis* is most similar to *L. douglasii* (Umpqua Valley), which has primary leaf segments 4-9 parted, 4-25 cm long and ciliate petals that reflex as fruit matures. Nutlets are without thin, scarious, scale-like tubercles.

Habitat: Sunny, vernally wet meadows and stream edges, in valleys and low foothills, including serpentine soils, below 2,500 ft.

Distribution: Douglas Co., Illinois Valley of Josephine, and historically Jackson Cos.

References:

Abrams	Meinke	Eastman
III-49 [sp. only]	206	108


COOS
DOUGLAS
CURRY
JACKSON
JOSEPHINE

Code: LOCO8

Scientific Name: *Lomatium cookii* J.S. Kagan

Family: Apiaceae (carrot family)

Common Name: Agate Desert lomatium

Plant Description: Perennial 1.5-5 dm tall, glabrous. Leaves oblong, 8-17 cm long excluding petiole, 2.5-10 cm broad, ternate then tri-pinnatisect (highly dissected), ultimate segments linear at 6-12 mm long and less than 1 mm broad. Flower stalks exceed leaves in length. Umbel 6-12-radiate, fertile rays 2-9 cm long, unequally elongate; sterile rays 1-2 cm long; involucel bractlets 8-12, 6-10 mm long, linear, and not toothed or lobed. Fruits oblong, 8-13 mm long, 4-6 wide, three dorsal ribs; lateral wings corky and thick and almost as wide as body.

Illus: G. Goodrich

Blooming Period: March - June.

Flower Color: Pale yellow to creamy tan.

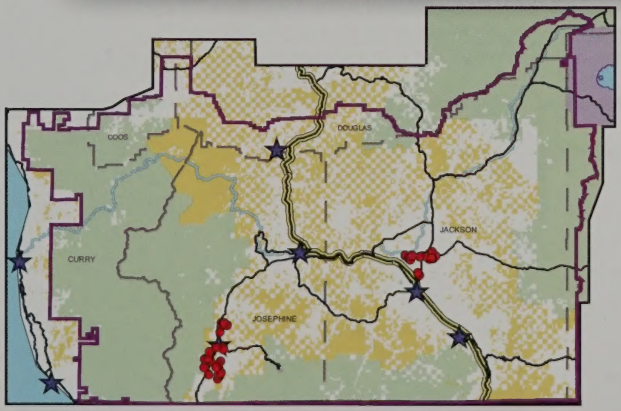
Distinguishing Characteristics: Low elevation, vernally moist habitat. Leafless flowering stems; linear (or narrowly lanceolate), simple involucel bractlets. Also, fruit corky thickened and almost as wide as the body.

Similar Species: *Lomatium tracyi* is most like *L. cookii,* but has a fruit with thin wings much less then the body length, and occurs in dry, open serpentine pine forests. *L. utriculatum* is very common in our area, and can grow intermixed with *L. cookii*, but cauline, not scapose, with leaves and flowers branching off the main stem. Petioles of L. utriculatum flare broadly where they meet the stem and involucel bractlets are broad and often fringed at the apex. *L. nudicaule* and *L. triternaturm* have simple (linear or oblanceolate leaves) triternate leaves, as opposed to the highly dissected leaves of *L. cookii. L. macrocarpum* similar, but has grayish foliage, and grows in dry habitats. *L. hallii* caulescent, with thin-winged fruit.

Habitat: In the Illinois Valley, this species occurs only in valley floor areas where alluvial silts or clays have been deposited over serpentine bedrock: alluvial meadows, moist grasslands, and along seasonal streams. Not found growing in serpentine habitats, but rather just adjacent to these areas. In contrast, in the Agate Desert near Medford, *Lomatium cookii* always found associated with vernal pool-mounded prairie habitat.

Distribution: Agate Desert area in Jackson Co., and the Illinois Valley in Josephine Co.

References: Eastman 88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Code: LOEN

Scientific Name: *Lomatium engelmannii* Mathias

Family: Apiaceae (carrot family)

Common Name: Engelmann's desert-parsley

Plant Description: Plant 1-3 dm high, stemless. Leaves bi- or tri-pinnate; petioles 2-10 cm long; blades 3-20 cm long; leaflets 1-15 mm long. Peduncle of entire inflorescence 12-20 cm long, secondary stalks of flower clusters 1-10 cm long, unequal; pedicel (stalk of individual flowers) 2-12 mm long. Fruit 7-14 mm long, glabrous, with wings one half the width of the body and has 1-2 oil tubes per rib interval.

Blooming Period: June - August.

Flower Color: Yellow.

Distinguishing Characteristics: Leaves shiny, dissected into 2-3 divisions with sheathing petioles tinged purple. No leaves on the flowering stems (peduncle). Ovaries and fruit hairless. No whorl of bracts beneath flower clusters. Whole plant grows close to ground.

Similar Species: *L. macrocarpum* has leaves with finer (3-4) divisions, bracts beneath the flower clusters, and leaves on the lower portion of the flowering stem. *L. tracyi* is similar to *L. engelmannii*, both growing on serpentine, but has bracts beneath the flower clusters and its fruit is acute at each end, has obscure oil tubes, and seed wings that are much narrower than the body width.

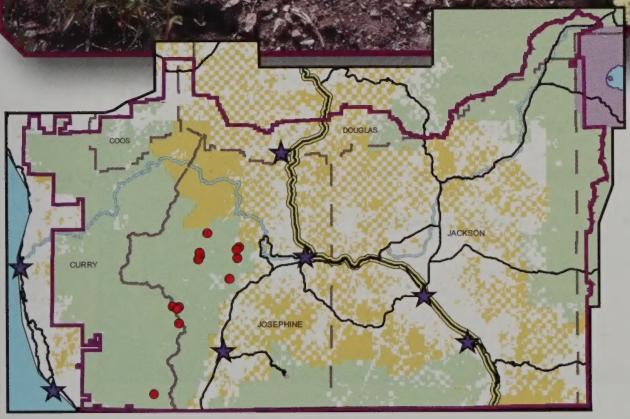
Illus: Abrams III-262

Habitat: Gravelly, serpentine slopes in coniferous forests and open areas at mid to high elevations (3,000-6,000 ft.).

Distribution: Siskiyou Mtns. of Josephine Co., Oregon and adjacent California.

References:

Abrams	Jepson
III-261	153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Code: LOST3

Scientific Name: *Lotus stipularis* (Benth.) Greene

Family: Fabaceae (legume family)

Common Name: Stipuled trefoil

Plant Description: Perennial, spreading hairs (feels soft), and is often glandular, 2-5 dm high, stems usually several, ascending or erect, branches near base. Leaflets 9-15, 5-20 mm. Inflorescence has 4-9 flowers; calyx 5-6.5 mm, lobe length less than tube length; corolla 10-12 mm. Fruit 2-2.5 cm long, 3-4 mm wide. Foliage often fragrant (balsalm-scented).

Illus: Abrams II-544

Blooming Period: April - June.

Flower Color: Pink to red-purple with white tips, wings white.

Distinguishing Characteristics: Leaflets 9-15, glandular, pinnately arranged, and large, leaf-like stipules often only clasp the stem slightly. Peduncle bract well below umbel, generally 3-5 parted. Flower color pink to red-purple. Hairs soft, generally spreading, sometimes glandular. Plants (not flowers) sometimes balsam-scented.

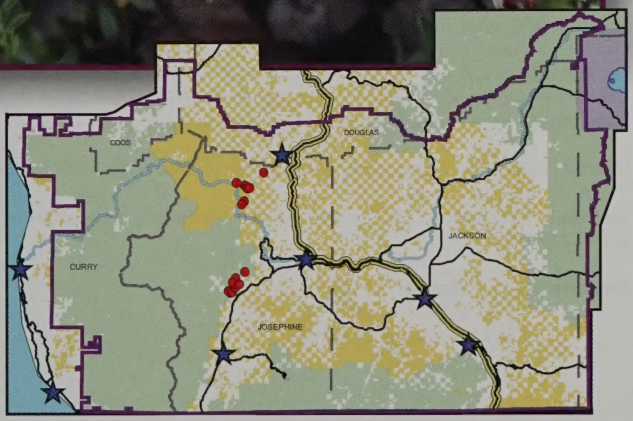
Similar Species: Numerous other *Lotus* are found in our area; many of these have stipules that are minute or greatly reduced, often present as tiny bumps (sometimes gland-like). *Lotus stipularis* var. *ottleyi* has a wiry stem (vs. fleshy in var. *stipularis*) and the stipules are always wide and obviously clasp the stem. *L. crassifolius* is a larger plant (4-12 dm), with more flowers (12-20) on the inflorescence, and the yellow-green flowers are larger at 12-17 mm. *L. aboriginus* occurs at lower elevations, is not hairy (or the hairs can only be seen with magnification), and the stipules are scarious and inconspicuous. Many of the other *Lotus* in our area are annuals, *Lotus stipularis* is a perennial.

Habitat: Open forests, stream beds, ditches, chapparal, and logged areas below 4,000 ft.

Distribution: Josephine Co. in the Klamath Mountains of Oregon; throughout California.

References:

Abram	Jepson
II-539	622
(*H. stipularis*)	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JOSEPHINE

Code: LULEA5

Scientific Name: *Lupinus lepidus* Dougl. Ex Lindl.
var. ***ashlandensis*** (B.J. Cox) Isely
(Lupinus aridus* ssp. *ashlandensis)

Family: Fabaceae (legume family)

Common Name: Mt. Ashland Lupine

Plant Description: Subalpine, erect, perennial herb, forming clumps 15-20 cm in diameter, plants short, only 7-12 cm tall. Leaves palmately compound, 5 to 7 leaflets, crowded and abundant from the basal crown, growing to 3 cm long, leaf undersurfaces densely wooly. Racemes 3.5-7 cm long; calyx 5.5-6 mm long, flowers 11 mm long, hairless, keel with sparse hairs on margin. Fruit 9-11 mm long, 3-4.5 mm wide.

Illus: Meinke 231

Blooming Period: July - August.

Flower Color: Lavender to bluish.

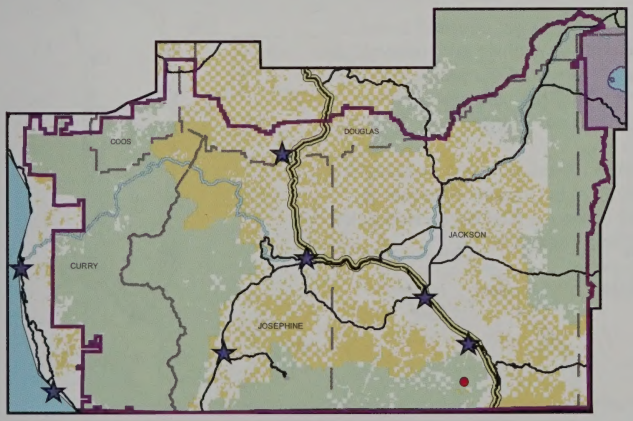
Distinguishing Characteristics: Herbaceous low lupine with erect stems, silvery leaves, and a spike-like inflorescence rising above the leaves.

Similar Species: *L. breweri* var. *breweri* is another pubescent mat-forming lupine that grows on Mt. Ashland. *L. lepidus* var. *ashlandensis* has a spike-like inflorescence that rises prominently above the leaves, while in *L. breweri* var. *breweri* the raceme is nearly sessile. Also the base of the plant is woody for *L. breweri* var. *breweri*. Another unspecified variety of *L. lepidus* occurs nearby on Red Mountain (Jackson Co., Oregon), but it has decumbent, leafy stems. The Mt. Ashland Lupine is very similar to *Lupinus lepidus* var. *sellulus*, which is known from Sugarloaf Mountain and the Marble Mountain Wilderness, as well as other parts of Oregon, California, Idaho and Nevada; *L. l.* var. *ashlandensis*, however, has slightly more erect flowering stems, and leaves are more confined to the base of the plant.

Habitat: Subalpine, dry, gravelly openings on granitic soils in full sun at or near ridges.

Distribution: Jackson Co., Oregon. Known from a single population on Mt. Ashland, above 7,000 ft.

References: Meinke
226
L. aridus ssp. *ashlandensis*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Code: LUTR

Scientific Name: *Lupinus tracyi* Eastw.

Family: Fabaceae (legume family)

Common Name: Tracy's lupine

Plant Description: Plant 4-7 dm high from a woody base. Petioles of lower leaves entirely fused with stipules, about 1 cm long, with leaflets dwarfed. Stem leaves with 6-7 leaflets, 1-4 cm long, 1-1.3 cm wide; the petioles are about as long. Inflorescence 4-16 cm long. Pedicel of individual flower 5-6 mm long. Calyx swollen on one side at base, 6-8 mm long; corolla 10 mm long. Seed pods white villous, 1.5-2.5 cm long.

Blooming Period: July - August.

Flower Color: Whitish to dull blue.

Distinguishing Characteristics: Herbage hairless and slightly glaucous (whitish film). Calyx upper lip cleft to the center, the lower 3-toothed, the narrow segments 2 mm long. Banner (upper petal) bent backwards and shorter than the lateral petals. Keel hairless and covered by the lateral petals. Leaves mostly on middle and upper stems rather than basal.

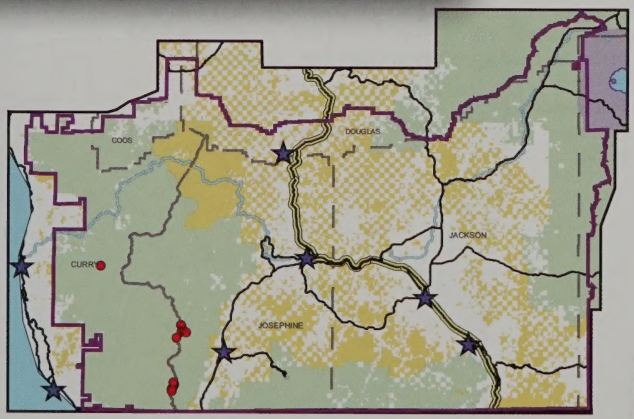
Similar Species: *L. tracyi* may key to *L. polyphyllus*, but this species is a much taller and more robust wetland lupine with normal green foliage, and leaflets longer than 4 cm. *L. latifolius* perhaps most superficially similar, but has fine hairs on stems and lower leaf surfaces.

Habitat: Dry openings, edges of forest, or in open woods on granitic and metavolcanic/ metasedimentary soils at moderate to high elevations. Often with the ground cover *Arctostaphylos nevadensis.*

Distribution: A few locations in Josephine and Curry Cos. in Oregon. Also rare in northwest California (Del Norte, Humboldt, Siskiyou, and Trinity Cos.).

References: Meinke 234 Jepson 636

Illus: Meinke 235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Code: MEOR

Scientific Name: *Meconella oregana* Nutt.

Family: Papaveraceae (poppy family)

Common Name: White meconella, Oregon meconella

Plant Description: Slender stems 3-12 cm tall. Basal leaves 6-20 mm long, with short petioles. Stem leaves slender, sessile. Flower stalk 2-4 cm long. Flowers small, sepals 2 mm long; petals 3-5 mm. Capsule 15-25 mm long.

Blooming Period: April - May.

Flower Color: White.

Distinguishing Characteristics: Tiny slender annual with spoon-shaped basal leaves and sessile, opposite stem leaves. Sepals usually 3. Petals white, usually 6. Stamens 4-6, in one series. Flowers borne singly on slender peduncles. Capsule linear and often somewhat contorted.

Similar Species: *M. californica* has 8-16 stamens in two series and petals 8-10 cm long; a California species and not known to be in our area. *M. linearis* has obovate fruit and no cauline leaves. Petals are 6-15 mm long, cream with yellow bases. *Minuartia douglasii* can look similar from a distance but has different leaves, 5 petals, 3 styles, 10 stamens, subglobose capsules, and winged seeds and belongs to a different family.

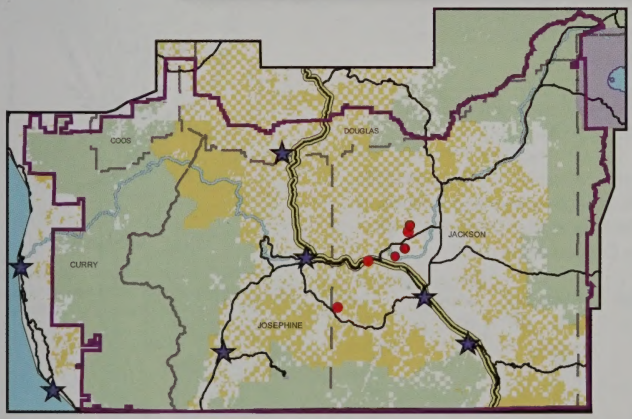
Habitat: Open ground and prairies on sandy, gravelly or serpentine soil, often vernally moist. Some northern Oregon sites are adjacent to vernal seeps on slopes.

Distribution: Rare in the Pacific Northwest, from Victoria, B.C. to the east Cascade Mtns. Known from Douglas, Hood River, Jackson, Josephine, and Wasco Cos., Oregon. Also known from a few occurrences south in Contra Costa and Santa Clara Cos., California.

References:

Abrams	H&C	HCOT	Eastman	Jepson
II-225	144	II-421	117	815
				[M. denticulata]

Illus: Hitchcock et al II-421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Code: MIDOD

Scientific Name: *Microseris douglasii* (D.C.) Schultz-Bip. ssp. *douglasii*

Family: Asteraceae (sunflower family)

Common Name: Douglas' microseris

Plant Description: An annual plant with glabrous, entire to pinnatifid leaves 5-25 cm long. Flowering stalks 1-6 dm tall with solitary yellow flower heads of 50-100 flowers. Inner phyllaries 5-18, subequal, lanceolate, 5-15 mm long; outer phyllaries 4-12. Achenes 4-10 mm long. Pappus parts 5-2, persistent, and 5-13 mm long. Palea 1-6 mm long, tapering into a barbellulate awn, 3-8 mm long.

Blooming Period: March - April.

Flower Color: Whitish-yellow.

Distinguishing Characteristics: Conspicuous palea scabrous to villous, 1-6 mm shorter than the achene, and achene ribs usually broadened and flared outward at the tip.

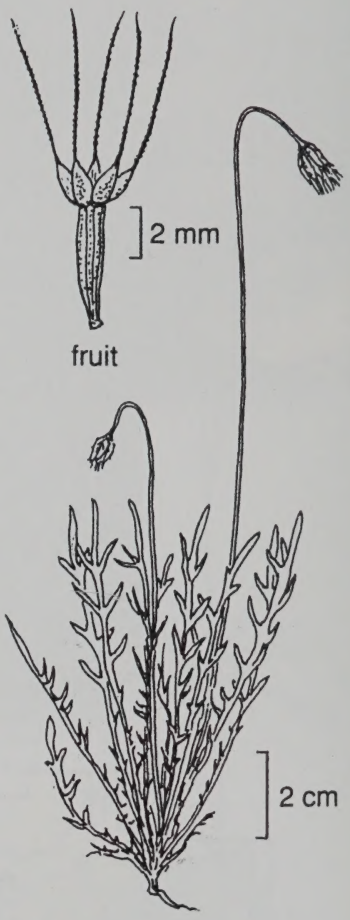
Similar Species: *M. acuminata* is the only other annual *Microseris* in our area. Fruit of *M. acuminata* flared at the tip, brown, and glabrous (or often scabrous); pappus scales 5, only slightly inrolled, white to light brown, 3.5-11 mm long (often > fruit body), and linear-lanceolate; ligules yellow. *Uropappus lindleyi* and *Stebbinoseris heterocarpa* have 5 pappus scales generally 5-12 + mm long, with pappus bristle arising from between 2 terminal teeth of the scale.

Habitat: Grassy flats and hillsides in heavy, often hard packed soil.

Distribution: Jackson Co., Oregon south through the interior valleys and foothills of central California to San Diego Co. Not collected in Oregon since 1889.

References:

Abrams	Jepson	Munz
560 sp. only	318	1291



Illus: Jepson 321

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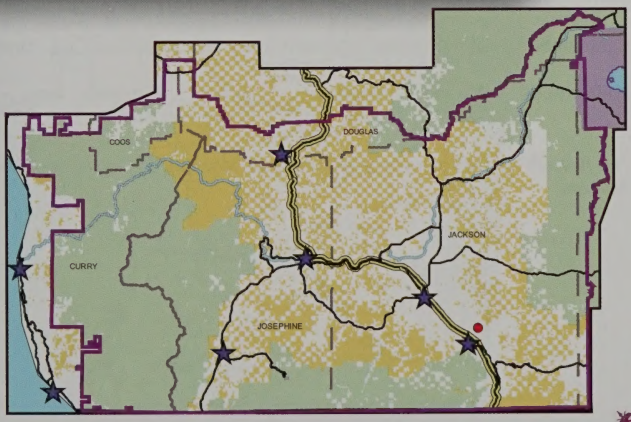
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Code: MIHO2

Scientific Name: *Microseris howellii* Gray

Family: Asteraceae (sunflower family)

Common Name: Howell's microseris

Plant Description: Stem 15-50 cm tall, usually solitary, branched below the middle (sometimes unbranched). Leaves mostly basal, up to 30 cm long, entire or with very slender lobes. Flower heads with 15-25 ray (petal shaped) flowers. Involucre bracts 8-18 mm high. Pappus 6-12 mm long, paleae 6-10 in number, 3-6 mm long, awned.

Blooming Period: April - July.

Flower Color: Pale yellow.

Distinguishing Characteristics: Narrower flower buds nodding until opening. Leaves linear, sometimes with linear lobes. Pappus parts 10 or less. Paleae lanceolate in outline. Awn minutely barbed but not plumose.

Similar Species: *M. laciniata* ssp. *siskiyouense* has smaller paleae (1-3 mm long) and more prominately barbed or subplumose awns. *M. laciniata* ssp. *leptosepala* has paleae 0.5-2.0 mm long. *Stebbinoseris heterocarpa* has long paleae, notched at tip with awn arising in the notch.

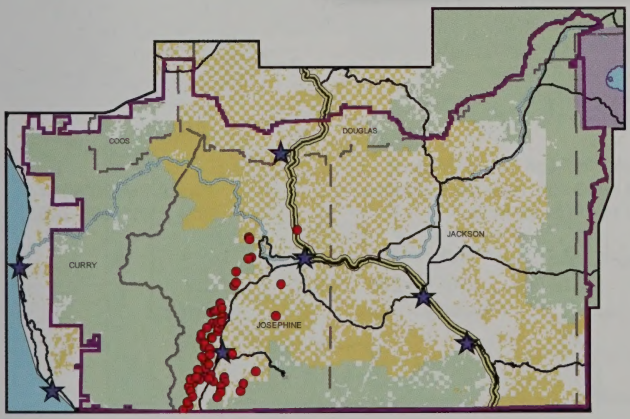
Illus: Abrams IV-557

Habitat: Found on slopes or flat ground with varying exposures, in rocky serpentine soils from 1,000-3,500 ft.

Distribution: Klamath Mtns., southern Curry and Josephine Cos., Oregon.

References:	Abrams	Meinke	Jepson	Eastman
	IV-557	240	*318	118

**M. howellii* is listed as misapplied under *M. laciniata* ssp. *siskiyouensis* in The Jepson Manual.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Code: MILAD

Scientific Name: *Microseris lanciniata* (Hook.) Schultz-Bip. **ssp.** ***detlingii*** Chambers

Family: Asteraceae (aster family)

Common Name: Detling's Microseris

Plant Description: Perennial from an elongated single taproot. Leaf with entire or slightly dentate basal leaves and nearly scapose stem, 10-50 cm. Yellow ligulate flower heads with ovate outer bracts, fruits with 10 or more pappus parts with long scales (4-8 mm) and subplumose awns.

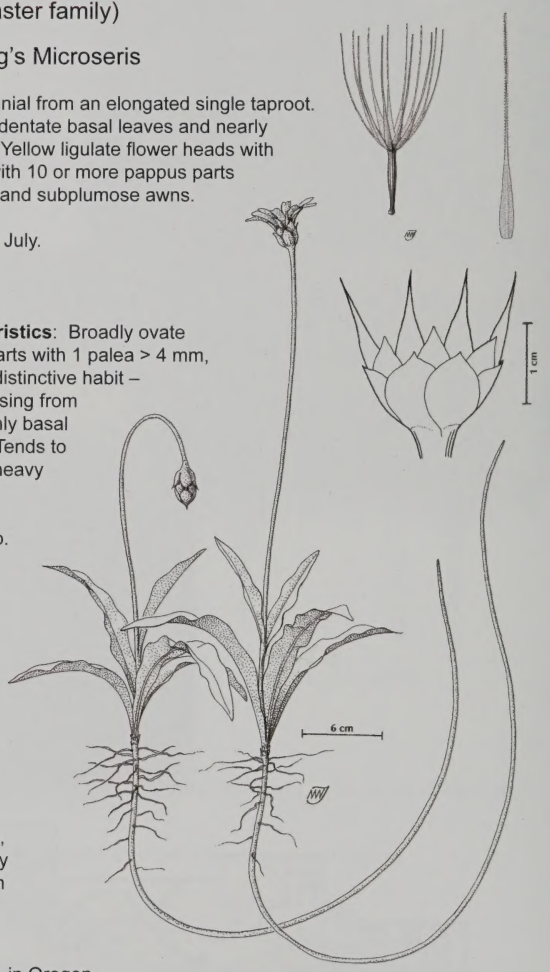
Blooming Period: June - July.

Flower Color: Yellow.

Distinguishing Characteristics: Broadly ovate outer phyllaries, pappus parts with 1 palea > 4 mm, subplumose awns, and a distinctive habit – an almost naked scape arising from one elongated taproot. Only basal leaves remotely dentate. Tends to grow in dense patches in heavy clay soil.

Similar Species: *M. l.* ssp. *laciniata* has palea less than 4 mm, narrower outer bracts, and dentate leaves. In the Butte Falls Resource Area (BLM), hybrids between ssp. *laciniata* and ssp. *detlingii* are common with 4 mm palea, wide outer bracts, and dentate basal eaves.

Habitat: Open grasslands, rocky meadows, heavy clay soils, below 2,000 ft. Often grows on mounds made by burrowing mammals.

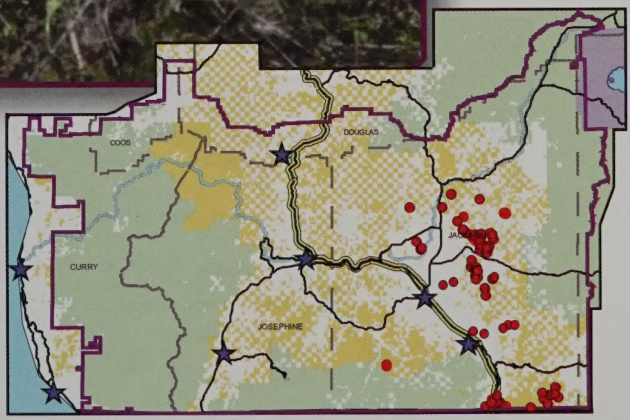


Distribution: Jackson Co. in Oregon. Occurs in a band from near the California state line at Hilt to Butte Falls.

Illus: Artist (NWJ) in SIDA 21(1): 193-205.

References:

Abrams	H&C	HCOT	Jepson	Munz
IV-556	540	268	318	1289
[..... ...sp. only.... .....]				[sp. only]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Code: MIBO3

Scientific Name: *Mimulus bolanderi* Gray

Family: Scrophulariaceae (figwort family)

Common Name: Bolander's monkeyflower

Plant Description: Annual, generally densely hairy, 2-90 cm. Leaf oblanceolate to ovate, lowest glabrous, upper densely hairy, 5-60 mm. Pedicel 2-5 mm, calyx wide-ribbed and often swollen in fruit, densely hairy, lobes may be more or less spreading in fruit, 7-28 mm. Corolla persistent.

Blooming Period: May - June.

Flower Color: Magenta, throat floor folds white.

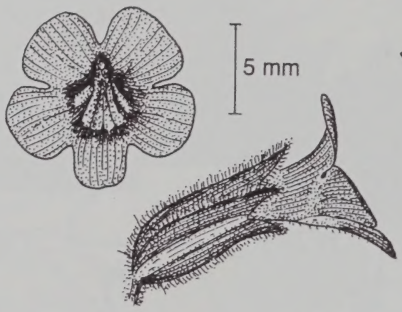
Distinguishing Characteristics: Corolla is magenta with white folds on the throat floor. Stigma generally included. Tube-throat 12-30 mm. Corolla slightly hairy outside, hairy and glandular inside in throat.

Similar Species: Our listed *Mimulus* spp. are all annuals with corollas some shade of red or lavender/purple. Only *M. bolanderi* has white coloration inside throat, and stigmas included rather than exserted.

Habitat: Burns, openings in chaparral (especially *Ceanothus cuneatus* brush fields), and disturbed areas at 1,000-2,500 ft.

Distribution: Jackson Co., Oregon, and throughout California.

References: Abrams III-724 Jepson 1040



Illus: Jepson 1041

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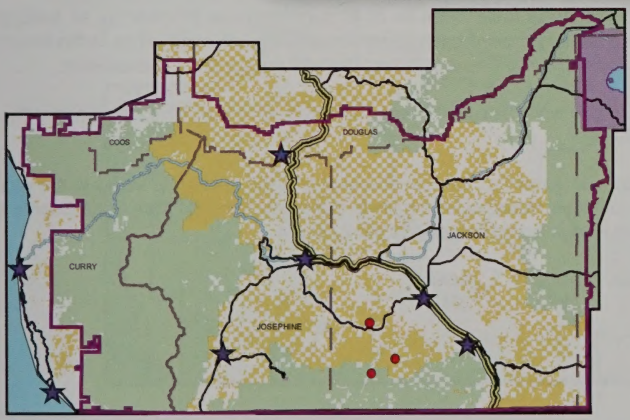
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Code: MICO2

Scientific Name: *Mimulus congdonii* B.L. Robins.

Family: Scrophulariaceae (figwort family)

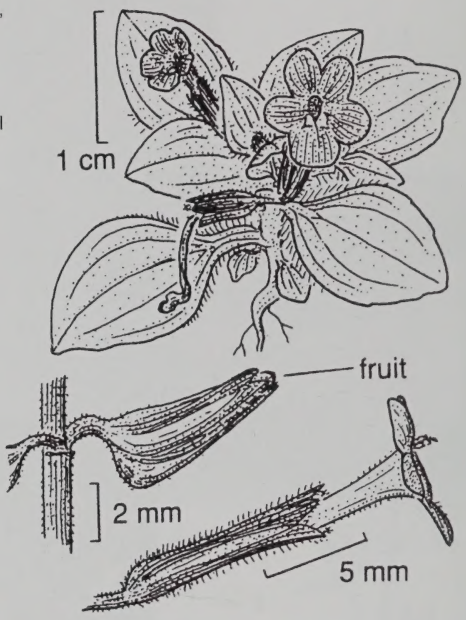
Common Name: Congdon's monkeyflower

Plant Description: Annual, 3-10 cm, puberulent, with a mix of glandular and non-glandular hairs. Leaf oblanceolate-elliptic, dull purplish green, often with ciliate petiole and base. Calyx 5-14 mm, lobes unequal 0.2-1 mm; corolla rose to magenta, tube-throat 8-25 mm, lower lip shorter than upper, 1.5-2 x length of calyx, sparsely hairy outside, often cleistogamous, lower 2 anthers and stigma exserted. Capsule asymmetrical, angular, laterally compressed.

Blooming Period: March.

Flower Color: Magenta.

Distinguishing Characteristics: In our region there are many lovely, small, purple to magenta monkeyflowers, but this species has a magenta flower without spots, slightly glandular pubescence, and flowers very early with distinctive angled, laterally compressed fruits present in April-May.



Illus: Jepson 1045

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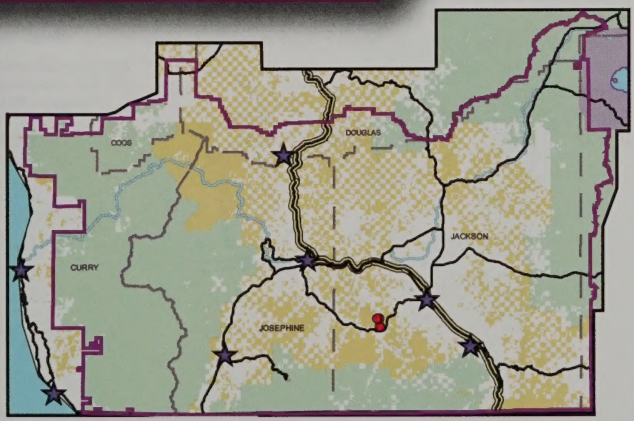
Similar Species: *Mimulus kelloggii*, *M. bolanderi* and *M. douglasii* occur in the same habitat, but flower much later and have symmetrical fruits. Flowers of *M. douglasii* have no lower lip; *M. kelloggii* and *M. bolanderi* are larger plants with larger flowers; the latter with white in the throats. Young plants of *Clarkia rhomboidea* are similar, but with no glandular pubescence.

Habitat: Oregon white oak-wedgeleaf ceanothus-whiteleaf manzanita chaparral, 1,000-3,000 ft.

Distribution: Jackson Co., Oregon; found only in the Applegate Valley in the vicinity of Ruch. In California, this species occurs in the Sierra Foothills from Butte County south and in the Coast Range from Mendocino County south.

References: Abrams III-730 Jepson 1042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JOSEPHINE

Code: MITR3

Scientific Name: *Mimulus tricolor* Hartw. ex Lindl.

Family: Scrophulariaceae (figwort family)

Common Name: Three-colored monkeyflower

Plant Description: Branching from the base, 1-14 cm tall. Leaves 1-4.5 cm long. Calyx 10-23 mm; corolla 3-4 cm long; the tube 20-40 mm; pedicel 1-3 mm.

Blooming Period: April - June.

Flower Color: Rose-purple. Corolla lobes rose-purple with a large maroon spot in the center of each lobe; the throat white with two yellow patches with dark purple spots within; tube is yellow.

Distinguishing Characteristics: Annual. Triangular dark spots on each petal lobe. Plant covered with sticky hairs and leaves with sticky hairs on the margins. Anthers hairy. Corolla tube twice the length of the calyx.

Similar Species: Floral tube of *M. kelloggii* and *M. douglasii* are more than twice the length of the calyx. *M. nanus* lacks the white on the corolla and the spots on the corolla lobes. *M. breweri* has pedicels longer than the calyx.

Habitat: Vernally moist depressions and clay soils below 2,000 ft.

Distribution: In Oregon, known from a few small populations in the Willamette Valley, and Klamath and Lake Cos. In California, found in the Central Valley and valleys in the northern Coast Range.

Illus: Jepson 1051

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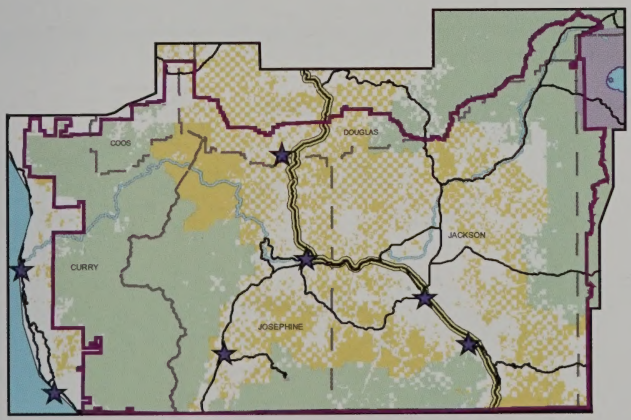
References:

Abrams	H&C	HCOT	Jepson	Munz
III-727	428	IV-349	1046	621


COOS
DOUGLAS
JACKSON
CURRY
JOSEPHINE

Codes: MOPU2

Scientific Name: *Monardella purpurea* T.J. Howell

Family: Lamiaceae (mint family)

Common Name: Siskiyou monardella

Plant Description: Stems spreading or decumbent, 10-40 cm high. Leaves 1.5-3 cm long with rolled margins. Inflorescence head 1.5-2.5 cm wide; middle bracts purplish, leathery, 12-18 mm long; corollas 12-14 mm long, lobes 1/2 tube.

Blooming Period: June - September.

Flower Color: Rose-purple.

Distinguishing Characteristics: Species extremely variable in habitat and appearance. Plants range from completely glabrous to puberulent, and from completely lax to upright. Leaves range from linear to oblong and from shiny to fairly dull. Stems purplish; shiny.

Similar Species: *M. purpurea* can grow at the same locations as the common and very similar *M. odoratissima*. *M. odoratissima* has hairy dull green stems and hairy leaves. Two other species may be in Oregon: *M. villosa* has short hairy stems and leaves; *M. glauca* distinguished by its lack of outer bracts. *M. purpurea* hybridizes with *M. glauca* in the Klamath Range.

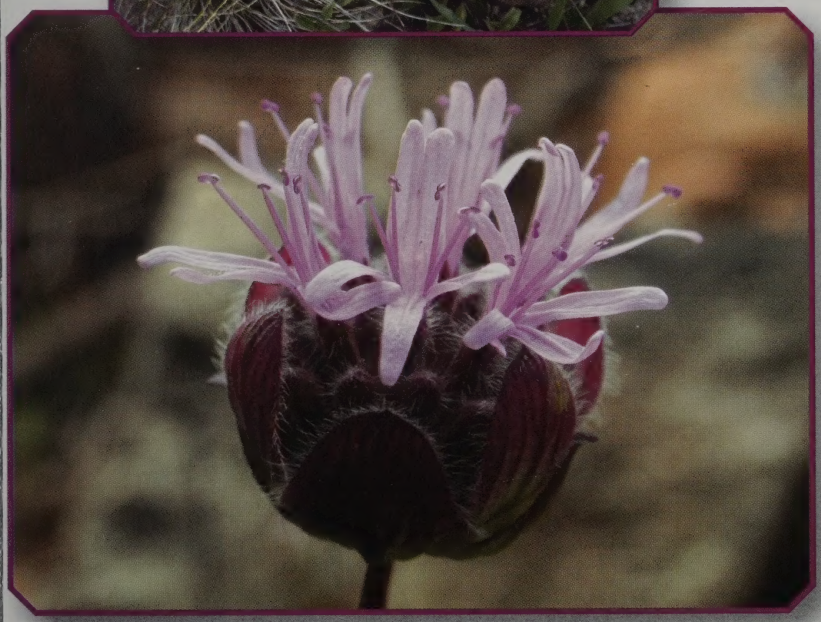
Illus: Abrams III-653

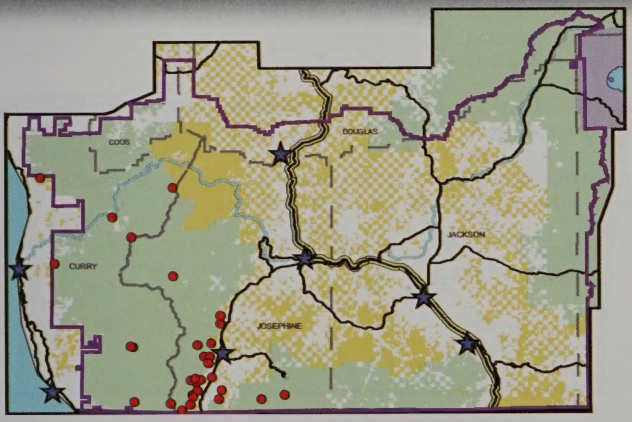
Habitat: Rocky, open slopes, chaparral, woodlands, and montane forest on serpentine soils (or related bedrock), 1,400-4,000 ft.

Distribution: Curry, Jackson and Josephine Cos., Oregon, and adjacent California. In California, found in the Klamath Range and in the Coast Ranges souh to the central-western portion of the state.

References:

Abrams	Eastman	Jepson	Munz
III-651	124	721	713




COOS
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Codes: NAHE

Scientific Name: *Navarretia heterandra* Mason

Family: Polemoniaceae (phlox family)

Common Name: Tehama navarretia

Plant Description: Often wider than tall, stem 3-11 cm, puberulent. Leaf 2-pinnate, lobe linear and needle-like, widely spreading. Inflorescence compact, densely hairy in center, bract tips often red. Calyx longest lobes toothed, hairy above middle, ribs strap-shaped; 6-8 mm, lobes 4-5; stamens unequal, exserted, stigmas 2. Fruit obovoid.

Illus: Abrams III-447

Blooming Period: June - August.

Flower Color: White, with purple spots below lobes.

Distinguishing Characteristics: The only white-flowered *Navarretia* in southwest Oregon with purple throat spots and with some plants having four-lobed flowers.

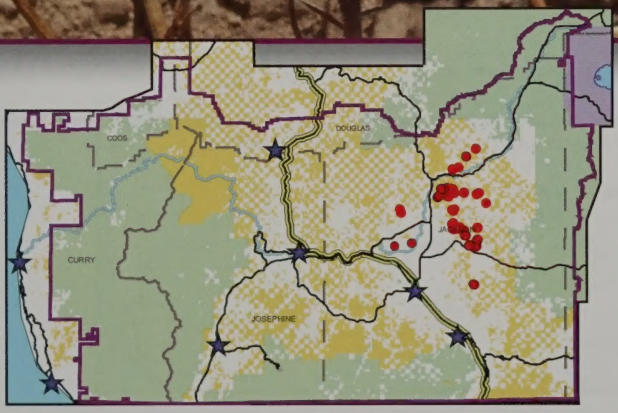
Similar Species: *N. pubescens* is the only other *Naverretia* in our area with strap-shaped calyx ribs which are wider at the base. Flowers of *N. pubescens* blue with a purple throat and dark purple lines. Other species have tapered calyx ribs narrower at the base than the membrane. *N. intertexta* is probably the most common *Navarretia* in our region, but the flowers are all white to a light blue color and the bracts and leaves are 3-parted. *N. heterandra* has been found growing between or among populations of *N. intertexta* and *N. pubescens*. In southwest Oregon it may be a hybrid between the two species.

Habitat: Wet or drying flats, vernal pools, heavy soils below 1,200 ft. Commonly occurs along old road traces and cattle trails.

Distribution: Jackson Co., Oregon. In California at the edge of Sacramento Valley in Shasta, Tehama, Yuba, Butte, Colusa, Lake and Trinity Cos.

References:

Abrams	Jepson	Munz
III-447	847	502


COOS
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CURRY
JOSEPHINE

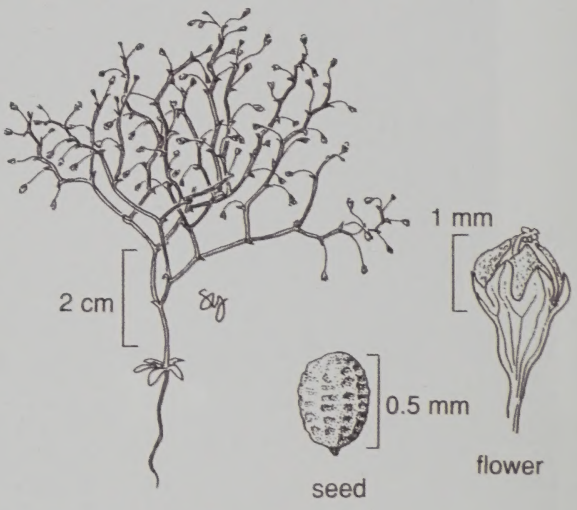
Codes: NECA

Scientific Name: *Nemacladus capillaris* Greene

Family: Campanulaceae (bellflower family)

Common Name: Slender nemacladus

Plant Description: Annual, stems stiffly ascending, 7-18 cm. Leaf ovate, entire, 3-15 mm. Inflorescence axis zigzag, especially in fruit, pedicels 8-12 mm. Flower inverted, bilateral; sepals erect, around 0.5 mm, elliptic to lanceolate; corolla divided to base, glabrous, 0.7-1.3 mm; filament tube around 1 mm, glabrous, tip slightly curved, anthers free.



Blooming Period: June - July.

Flower Color: White.

Distinguishing Characteristics: A small annual with zigzag inflorescence axis, inverted white flowers, filaments united into a tube above middle, ovary with three rounded glands, and basal rosette of entire, ovate leaves. A delicate plant with many thread-like branches.

Illus: Jepson 467

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Similar Species: *N. rigidus* occurs only in southeast Oregon and has spreading to decumbent stems.

Habitat: Dry slopes, burned areas, 1,200-6,500 ft.

Distribution: Jackson Co., Oregon; more common in Coast Ranges, Sierra Nevada foothills, and Great Basin and desert Province in California.

References:

Jepson	Munz
466	1068

K.L. Chambers 1995 OSC
Oregon Flora Project

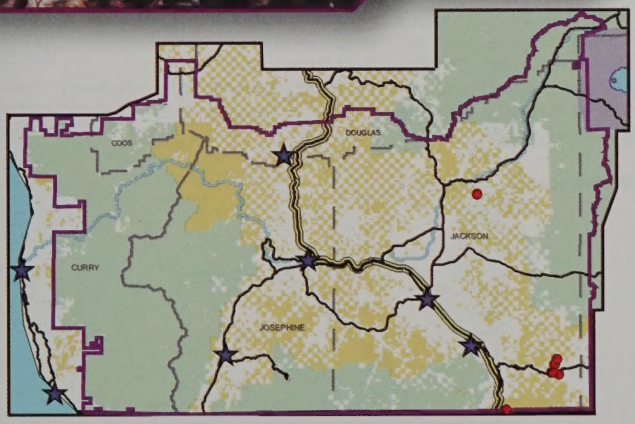
Oregon State University
PLANTS OF OREGON

NEMACLADUS CAPILLARIS Greene

JACKSON Co.: Lincoln, on Hwy. 66 (Greensprings), Cascade Mountains, 300 feet NW of junction of Corral Creek Rd. with Hwy. 66; T.40S., R.4E., Sec. 7. Gravelly dry edge of forest, with Ceanothus cuneatus, Arctostaphylos, Eriophyllum lanatum.

June 20, 1991

Coll.: Richard Brock
Det.: K. L. Chambers, 8/8/91



Codes: OPPU3

Scientific Name: *Ophioglossum pusillum* Raf.

Family: Ophioglossaceae (Adder's Tongue)

Common Name: Adder's Tongue

Plant Description: Roots yellow to tan, with bulbets. Stem upright, fragile, bearing sterile frond (trophophore). Sterile frond, flat, blade oblanceolate to obovate, less than 10 cm long, netted veins. Fertile frond (sporophore) 2-4.5 x sterile blade, slender, unbranched; sporangia in 2 rows, sunken in linear axis, 10-30 pairs.

Identification Period: June - September.

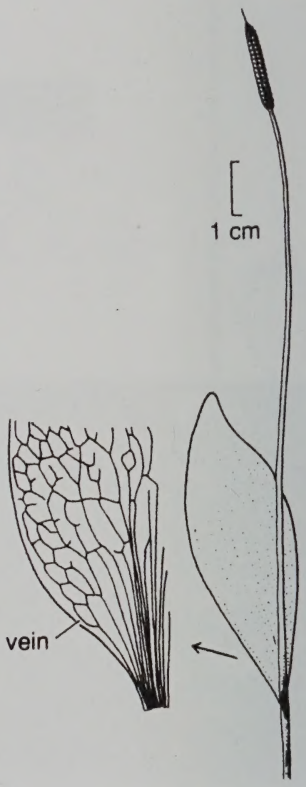
Distinguishing Characteristics: A single oval leaf with net venation and one fertile stalk with spore cases that look like beads. The fertile pointed tip may or may not resemble a snake's tongue.

Similar Species: Only member of *Ophioglossum* growing in the Pacific Northwest. Some monocots similar in appearance, but they possess parallel venation, not netted.

Habitat: Open fens, wet meadows, marsh edges, grassy shores, pastures, and roadside ditches. In Oregon, often found with *Botrychium multifidum*.

Distribution: In Oregon, occurs at a few coastal sites in Coos and Lane Cos., 5-100 ft above sea level; and along the western edge of the western Cascades from Clackamas to Douglas Co. up to 4,500 ft. Clackamas, Coos, Douglas, Lane, Linn Cos. in Oregon; from British Columbia to northern California and east to Montana; eastern Canada to the Midwest and Maryland. A deciduous and rather inconspicuous fern, so it may be more common than collections and surveys indicate.

References: Jepson
99



Illus: Jepson 103

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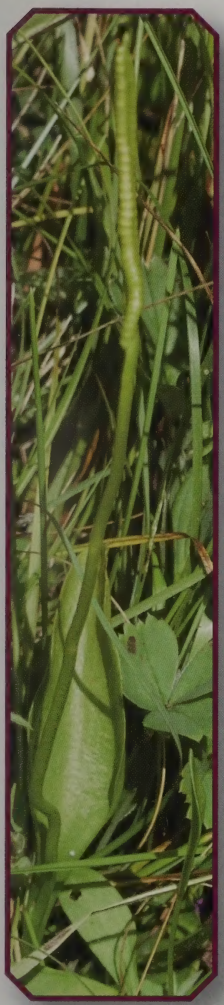

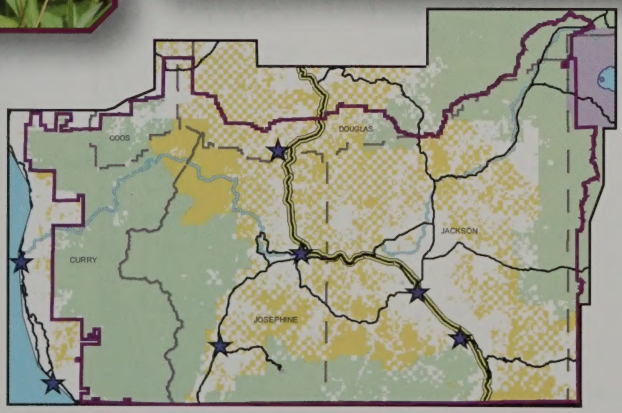
COOS
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JACKSON
CURRY
JOSEPHINE

Code: PEHO

Scientific Name: *Pedicularis howellii* Gray

Family: Scrophulariaceae (figwort family)

Common Name: Howell's lousewort

Plant Description: Plant 3-4.5 dm high. Leaves 3-5 long, deeply lobed to entire on uppermost leaves. Flowers in dense, short spike with flower bracts nearly equal to flowers, corolla 8-10 mm long.

Blooming Period: June - August.

Flower Color: Pale yellowish and white; hood rose-purple.

Distinguishing Characteristics: Five densely hairy, very short calyx lobes; stems without basal leaves.

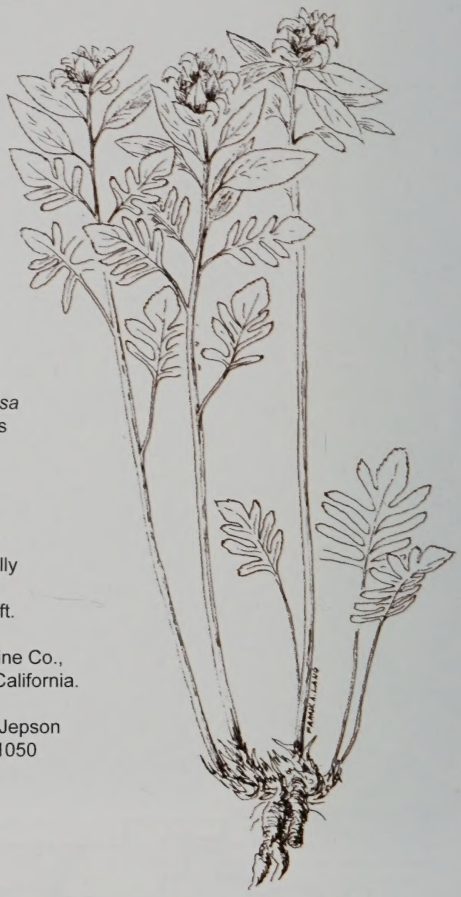
Similar Species: *Pedicularis racemosa* can be distinguished on the basis of its two lobed calyx and long, narrow, undivided leaves.

Habitat: Ridges and slopes in mixed coniferous forests. Usually forest and meadow or brushfield edges, or partially open canopy, with mountain hemlock, Douglas-fir, and true firs; 5,000-6,000 ft.

Distribution: Siskiyou Mtns., Josephine Co., Oregon; Del Norte and Siskiyou Co., California.

References:

Abrams	Meinke	Jepson
III-809	246	1050



Illus: Meinke 247

COOS
DOUGLAS
JACKSON
CURRY
JOSEPHINE

Code: PEAN2

Scientific Name: *Pellaea andromedifolia* (Kaulfuss) Fee

Family: Pteridaceae (brake family)

Common Name: Coffee fern

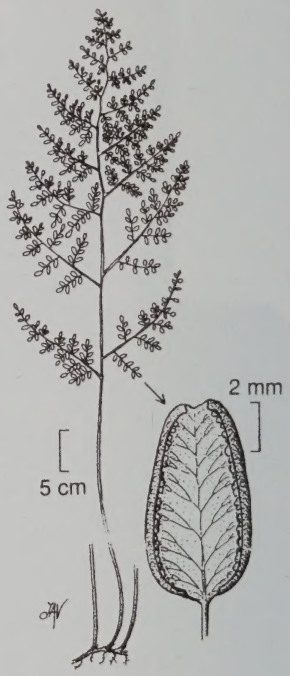
Plant Description: Rhizomes slender, wide-creeping; scales generally bicolored, centers black, margins brown, narrowly lanceolate, irregularly dentate. Leaves scattered along stem, monomorphic, 10-60 cm, green to purplish; petiole not lustrous, straw, tan or gray; blade generally 3-pinnate (2-4) elongate triangular, segments 6-15 cm, tip rounded to obtuse, notched or not. Pinnae ascending or perpendicular to rachis with 8-50 ultimate segments; ultimate segments elliptic to ovate, 3-15 mm, somewhat herbaceous. Sporangia along veins at tips.

Distinguishing Characteristics: A 3-pinnate rock fern with triangular fronds, light-colored petiole and rounded, obtuse or notched segment tips. Leaves scattered along stem, not opposite or nearly so, giving an open appearance. These ferns also turn red-purple with age.

Similar Species: Leaf segments of *P. mucronata* var. *mucronata* are smaller, around 6 mm long and 2 mm wide, with a small point at the tip. Petiole also dark brown to blackish, instead of light brown in *P. andromedifolia*, and rhizomes are stout and massive, not slender. Other members of this genus only 1 or 2-pinnate. Some other common ferns of dry places have wiry, blackish petioles; *Cheilanthes* has scales, hairs or glands on lower leaf surfaces, while *Aspidotis* generally has sessile sterile leaf segments.

Habitat: Rocky or dry areas, rock crevices and under boulders, 100-6,000 ft.

Distribution: Coos, Douglas, Jackson, and Lane Cos. in Oregon; throughout California and south to Baja California.



Illus: Jepson 107

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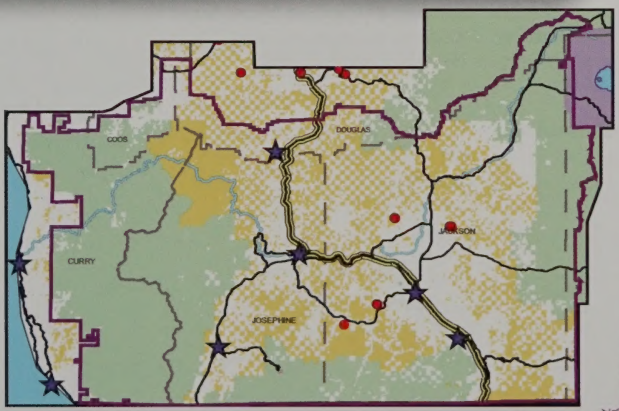
References:

Abrams	Jepson
I-30	106


COOS
DOUGLAS
CURRY
JOSEPHINE

Code: PEMUM

Scientific Name: *Pellaea mucronata* (D.C. Eat.) D.C. Eat. ssp. *mucronata*

Family: Pteridaceae (brake family)

Common Name: Bird's-foot fern

Plant Description: Rhizome thick, woody, short-creeping and branched; scales brownish with darker midstripe. Fronds mostly fertile, 20-40 (60) cm long, 5-15 cm wide, stiff. Leaf stalk purplish-brown, leaves greenish-purplish. Leaf blade 2-3 (4) pinnate (divided), pinnules 6-15 pairs, the larger ones 3-foliate or ternately divided. Sporangia mostly hidden by recurved margins.

Distinguishing Characteristics: Leaf blade 2-3-pinnate (sometimes 4), primary leaflets compound, not overlapping, narrowly triangular to oblong, petiole dark. Leaf segment generally 6 mm long and 2 mm wide, with a small point at tip (also present in *P. brachyptera*). Fertile segments not appearing folded in half, recurved margins not meeting, sporangia visible on lower surface.

Similar Species: *Pellaea brachyptera* has leaf blades 2 pinnate, with 5-11 narrowly linear segments, usually simple and less than 10-20 mm. Subspecies *californica* occurs in California only.

Habitat: Rocky or dry areas, all elevations.

Distribution: Josephine and Jackson Cos. in Oregon; Nevada, California, and Mexico.

Illus: Abrams I-31

References:

Abrams	Jepson
I-31	106
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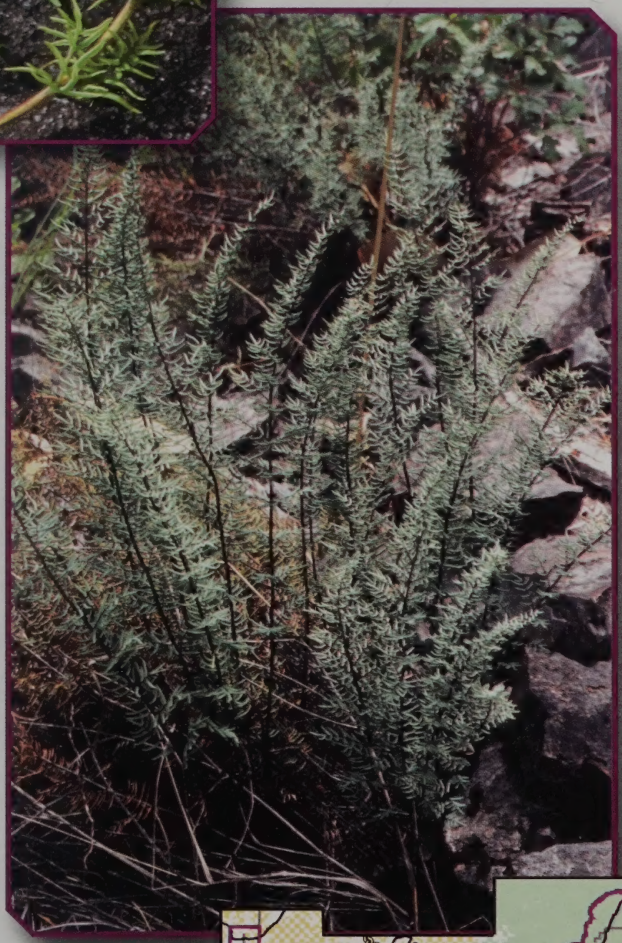

COOS
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CURRY
JOSEPHINE

Code: PEER3

Scientific Name: *Perideridia erythrorhiza* (Piper) Chaung & Const.

Family: Apiaceae (carrot family)

Common Name: Red-root yampah

Plant Description: Stems 60-80 cm tall, basal leaves ovate-lanceolate, 10-20 cm long, compound, ultimate divisions 3-12 cm long. Cauline leaves pinnate or ternate. Peduncle 4-12 cm. Involucre wanting or of 1 bract. Flowers in umbels; rays 6-11 (primary stalks of flower clusters within the inflorescence) 1-5 cm long, distinctly unequal. Involucel of linear-lanceolate bracts 2-3 mm long. Petals 1.8 mm long and 1 mm broad. Fruit 4-7 mm long, 3.5 mm broad, tapering at both ends.

Blooming Period: July - August.

Flower Color: White.

Distinguishing Characteristics: Branching, unequal rays. Narrow multi-nerved petals. Ellipsoid fruit tapers at both ends. Carrot-like, red-rose to red-brown colored root tubers.

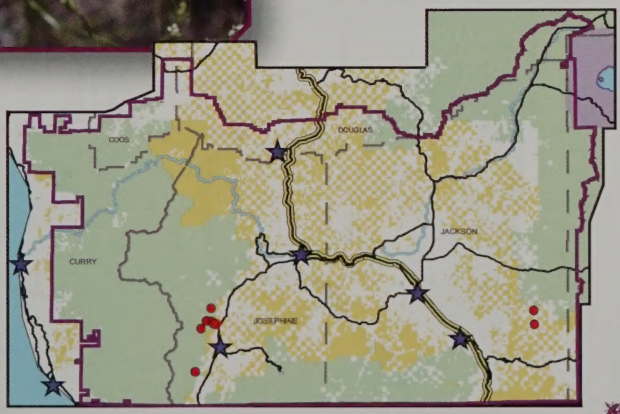
Similar Species: Other species have tan or cinnamon-brown roots and fruit characteristics somewhat different. *P. oregana* stems stout and glaucous, and this species has several involucre bracts; *P. erythrorhiza* has only one involucre bract and its stems are green and slender with flimsy leaves. *P. bolanderi* has 8 or more involucre bracts, oblong fruit, and petals 1-veined. *P. gairdneri* can be differentiated by its round fruit.

Habitat: Vernally moist depressions in heavy, poorly drained soils. Frequenting oak or pine woodlands at lower to mid elevations (up to about 5,000 ft.) in the Cascade Mtns. Josephine Co. sites are in serpentine habitat. Often grows in association with *P. oregana*.

Distribution: Douglas, Klamath, Josephine, and Jackson Cos., Oregon.

References: Meinke 258

Illus: Meinke 259


COOS
DOUGLAS
JACKSON
CURRY
JOSEPHINE

Code: PHLE2

Scientific Name: *Phacelia leonis* J.T. Howell

Family: Hydrophyllaceae (waterleaf family)

Common Name: Siskiyou phacelia

Plant Description: Annual, typically 4-15 cm tall. Basal leaves opposite, linear to oblong, approximately as long as the flower clusters. Corolla 2-3 mm, widely bell-shaped, lavender, about 3 mm long.

Blooming Period: June - July.

Flower Color: Lavender.

Distinguishing Characteristics: Annual, generally 2.5-8 cm tall (occasionally reaching 15 cm). Opposite, linear basal leaves. Small (3 mm) lavender flowers.

Similar Species: Due to overlapping ranges, *P. greenei* and *P. pringlei* can be mistaken for *P. leonis*. However, *P. leonis* has lighter colored flowers, a smaller plant overall, and not found on highly concentrated serpentine soils. Compared to *P. leonis*, *P. pringlei* has slightly larger flowers and typically prefers seasonally moist habitats.

Illus: Jepson 707

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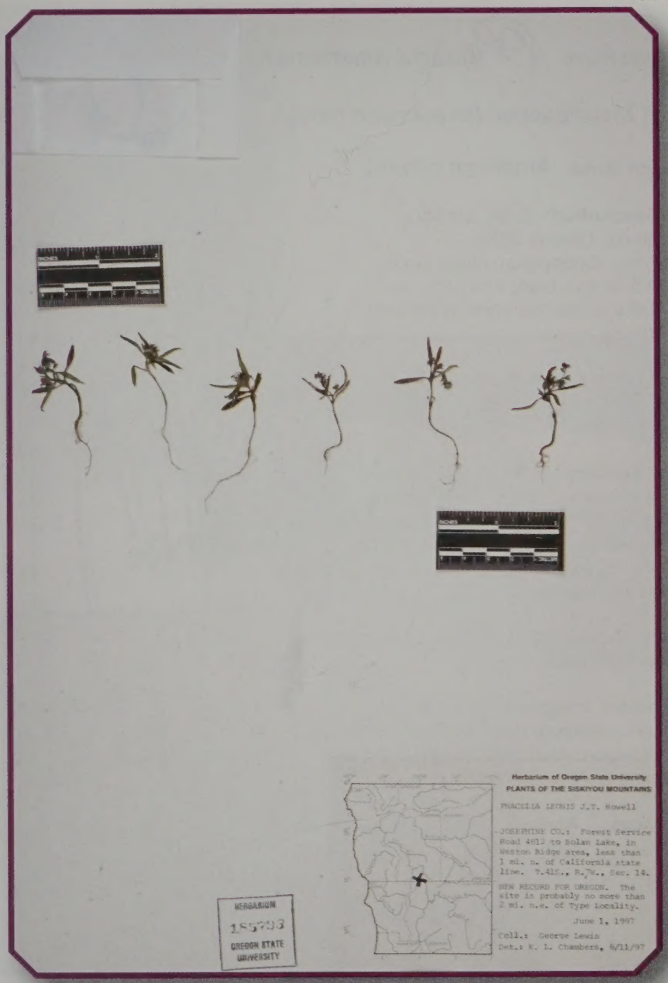
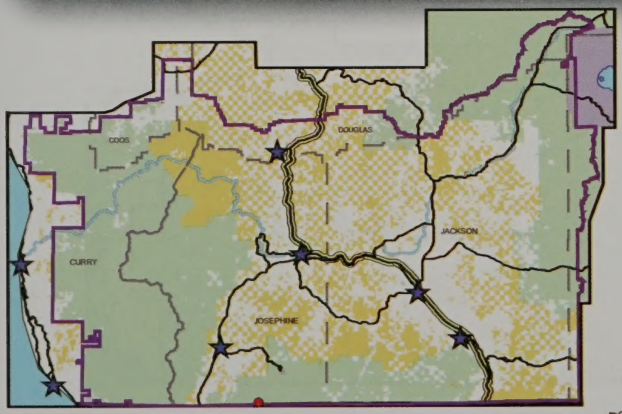
Habitat: Rocky to sandy openings in coniferous forests. Commonly found on ultramafic soils, 3,900-6,500 ft.

Distribution: Josephine Co. in southwestern Oregon; Klamath Mtns. of California.

References: Jepson
701


Herbarium of Oregon State University
PLANTS OF THE SISKIYOU MOUNTAINS
PHACELIA LEONIS J.T. Howell
JOSEPHINE CO.: Forest Service Road 4012 to Bolan Lake, in Weston Ridge area, less than 1 mi. N. of California state line. T.41S., R.7W., Sec. 14.
NEW RECORD FOR OREGON. The site is probably no more than 2 mi. N.E. of Type Locality.
June 1, 1997
Coll.: George Lewis
Det.: R. J. Chambers, 6/11/97
HERBARIUM
18793
OREGON STATE
UNIVERSITY


COOS
DOUGLAS
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CURRY
JOSEPHINE

Code: PIAM

Scientific Name: *Pilularia americana* A. Braun

Family: Marsileaceae (pepperwort family)

Common Name: American pillwort

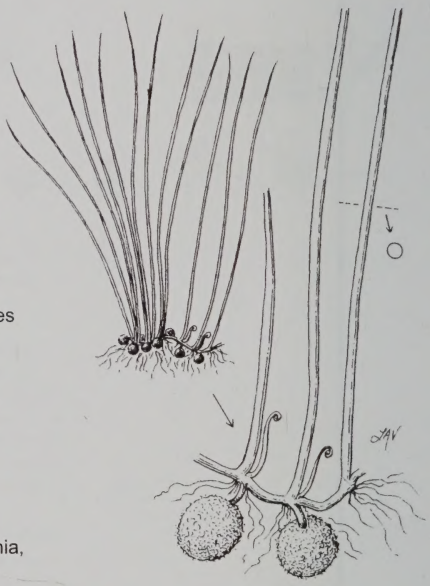
Plant Description: Small, rush-like appearance. Leaves filiform 2-6 (11) cm. Sporangium cases single, 2-3 mm diameter, hairy, and occur on short stalks on the rhizomes, in the axils of the leaves.

Distinguishing Characteristics: Leaves basal, filiform. Reproduce by spores, sporangium case globose.

Similar Species: Only *Pilularia* species in North America. Differs from quillworts (*Isoetes*), which have corm-like plant bases and erect new leaves. *P. americana* has rhizomes and new leaves are coiled, unrolling as they develop.

Habitat: Vernal pools, mud flats, lake margins, reservoirs.

Distribution: Irregularly from Crook, Deschutes, Jackson, Lake, and Klamath Cos. in Oregon. Also scattered in California, central and southeastern U.S.



Illus: Jepson 103

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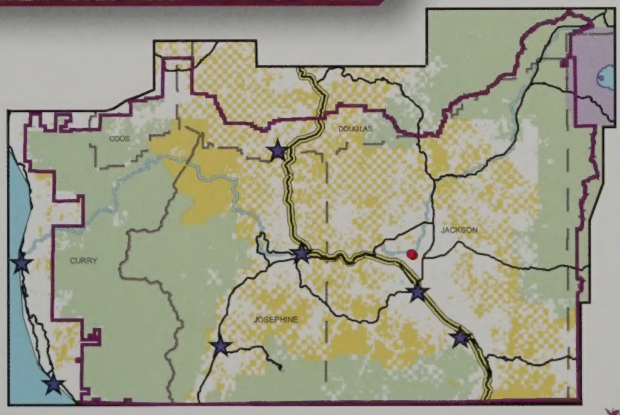
References:

Abrams	H&C	HCOT	Jepson
I-34	56	I-100	98


COOS
DOUGLAS
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JOSEPHINE

Code: PLAU

Scientific Name: *Plagiobothrys austiniae* (Greene) I.M. Johnston

Family: Boraginaceae (borage family)

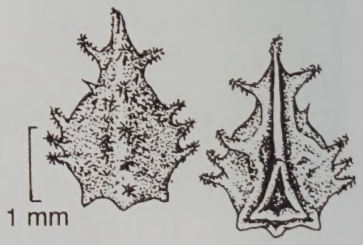
Common Name: Austin's plagiobothrys

Plant Description: Annual, stem decumbent to erect, 10-40 cm. Cauline leaves, lower 1-5 cm. Inflorescence bracted towards base. Calyx 5-8 mm, corolla 1-2.5 mm wide, white. Nutlet widely ovoid, angled, prickles on midrib and lateral ribs only, bristled, stout; lateral scar near base of nutlet.

Blooming Period: April - May.

Flower Color: White.

Distinguishing Characteristics: For accurate identification of members of this genus, an examination of the nutlet is required. Look for large bristly prickles on midrib and lateral ribs.



P. austiniae nutlets
Illus: Jepson 391

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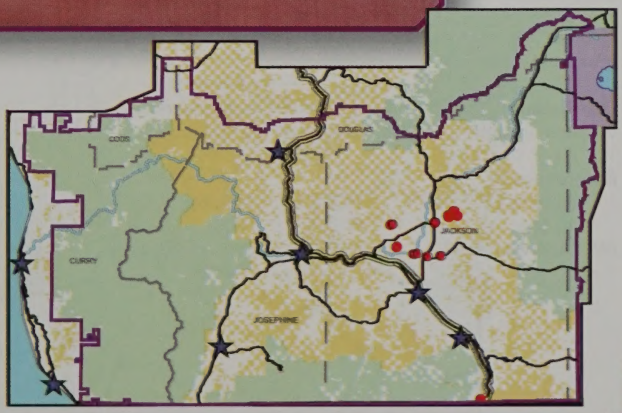
Similar Species: In our region, there are nine species of *Plagiobothrys,* some of which are superficially similar in appearance. *P. greenei* is the only other species in our area with large stout bristly prickles on the nutlets, but the prickles extend all over the back, compared to just the midrib and lateral ribs on *P. austinae*.

Habitat: Vernally wet areas, wet sites, and along roads and trail edges.

Distribution: Jackson Co. in Oregon; east side of Central Valley from Shasta Co. to Stanislaws Mtns., in California.

References: Jepson
388


COOS
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JOSEPHINE

Code: PLFIC

Scientific Name: *Plagiobothrys figuratus* (Piper) I.M. Johnst. ex M.E. Peck **ssp.** *corallicarpus* (Piper) Chamb.

Family: Boraginaceae (borage family)

Common Name: Coral-seeded allocarya

Plant Description: Tall annual 3-7 dm high, with stout stems. Leaves linear, lower opposite, 4-12 cm long. Upper leaves reduced, alternate, 1-5 cm long. Calyx 3-5 mm at maturity, corolla showy, 8-14 mm broad. Nutlets ovoid 1-1.5 mm long.

Blooming Period: June - July.

Flower Color: White.

Distinguishing Characteristics: Lower leaves opposite. Scar on nutlet (where attached to the receptacle) less than 1/4 the length of the nutlet and not deep. Nutlet scar on the lower part of the inner face rather than directly basal. Nutlets not prickly, but strongly and irregularly ridged and bumpy, reminiscent of coral. Calyx lobes not strongly ribbed. Racemes mostly in pairs. Pubescence soft and appressed on stems and leaves. Corolla large enough to be showy.

Similar Species: Typical *P. figuratus* is shorter, 1.5-4.5 dm high, with smaller corollas, 4-8 mm wide. *P. hirtus* has coarse and stiff pubescence, not appressed, and nutlets considerably smoother, with more regularly spaced ridges. *P. glyptocarpus* shorter and has much deeper and longer nutlet scar. *P. greenei* and *P. austiniae* differ in that their nutlets have prickles and the scar is > 25% of the nutlet length. Also, these two plants are shorter (< 3 dm). Other species such as *P. nothofulvus*, P. *tenellus*, P. *shastensis*, etc. have obvious basal rosettes, cauline leaves that are opposite throughout, and generally grow in drier areas.

Habitat: Vernally moist, rocky, open areas in grassland meadows.

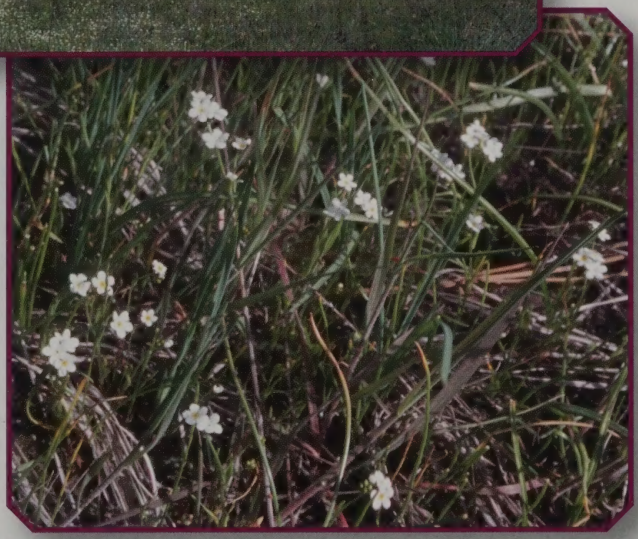
Distribution: Thought to be extinct until re-discovered in Jackson and Josephine Co., Oregon in 1991.

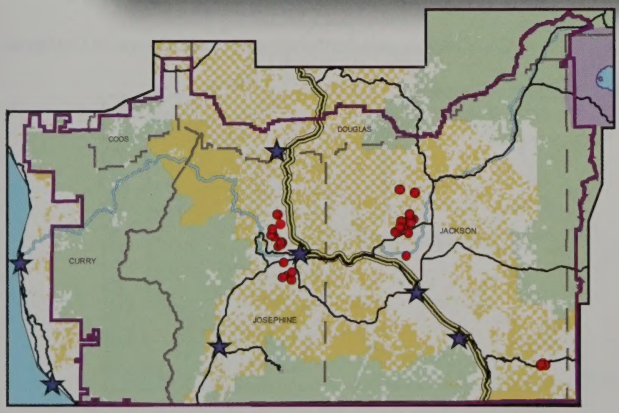
References:

Abrams	H&C	HCOT	Meinke
III-565	*397	IV:237	*266

[Allocarya figuratus] **[P. hirtus* ssp. *corallicarpa]*

Illus: Meinke 267

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Code: PLGL2

Scientific Name: *Plagiobothrys glyptocarpus* (Piper) I.M. Johnston

Family: Boraginaceae (borage family)

Common Name: Scultured allocarya

Plant Description: Annual, 1-5 dm tall, stems with stiff, sharp appressed hairs, branching from near base. Leaves cauline, linear 4-8 cm long, upper oblong-linear. Racemes loosely flowered, bracted near base. Corolla 2-9 mm wide, calyx 3-5 mm. Nutlet about 2 mm, ovoid, lateral ribs and cross-ribs narrow, high, mostly toothed, irregular; interspaces deep and finely tuberculate. Ventral side of nutlet keeled down to scar. Scar is near base and deeply excavated, narrowly triangular, about 1/2 as long as the nutlet.

Illus: Abrams III-562

Blooming Period: April - May.

Flower Color: White (often yellow in tube).

Distinguishing Characteristics: Fully mature nutlets critical for i.d. Nutlet scar mostly triangular; nutlet about 2 mm, cross-ribs narrow. Also, plant stem ascending to erect, and lower leaves 4-8 cm.

Similar Species: Many other *Plagiobothrys* species in this area (*P. stipitatus, P. figuratus, P. nothofulvus, and P. bracteatus*) have a nutlet scar only 1/5 or shorter as long as the nutlet. *P. greenei* can be distinguished by the prickles all over the nutlet back and *P. tenellus* has a cross-shaped nutlet.

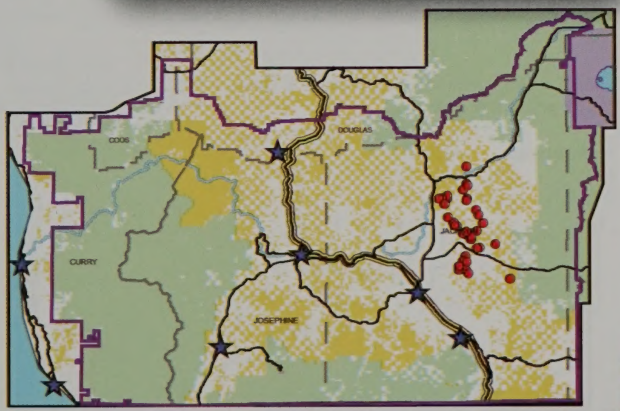
Habitat: Moist places, grasslands, woodlands, vernal pools, below 2,000 ft.

Distribution: Jackson Co., Oregon, and northwest and Coast Range of California.

References:

Abrams	Jepson
*III-562	388

* *Allocarya g.*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Code: PLGR

Scientific Name: *Plagiobothrys greenei* (Gray) I.M. Johnston

Family: Boraginaceae (borage family)

Common Name: Greene's popcorn flower

Plant Description: Stem decumbent to erect, 10-40 cm. Cauline leaves, lower 1-5 cm. Inflorescence bracted towards base. Calyx 5-8 mm, corolla 1-2.5 mm wide. Nutlet widely ovoid, angled, prickles all over back, long, slender, and bristled; lateral scar near base of nutlet.

Blooming Period: April - June.

Flower Color: White.

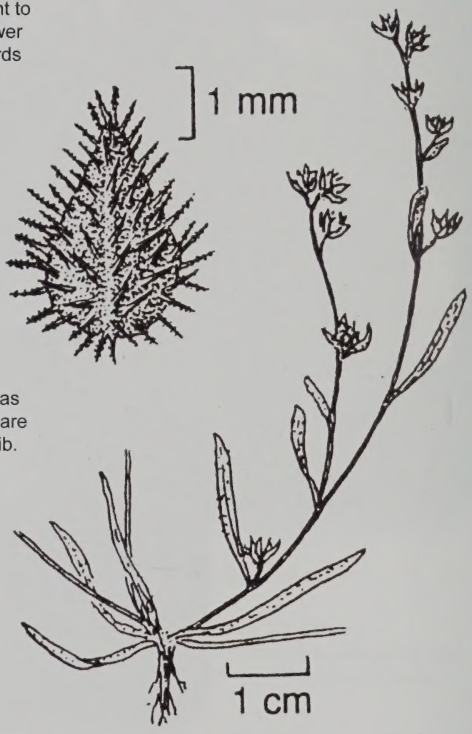
Distinguishing Characteristics: Large bristly prickles present over the entire back of the nutlet.

Similar Species: *P. austinae* also has large prickles on the nutlet, but they are restricted to the lateral ribs and mibrib. Look at the attachment scar of the mature nutlet: for both *P. greenei* and *P. glyptocarpus* scar deeply excavated and large, 1/4 to 1/2 the length of the nutlet, whereas other species inhabiting wet sites have small, less distinct scars up to 1/5 the length of the nutlet. *P. glyptocarpus* has narrower nutlets (2 mm long) with deep ridges and it lacks large prickles.

Habitat: Vernally wet areas, and along trails and old roads.

Distribution: Jackson and Josephine Cos. in Oregon; California.

References: Jepson
389



Illus: Jepson 391

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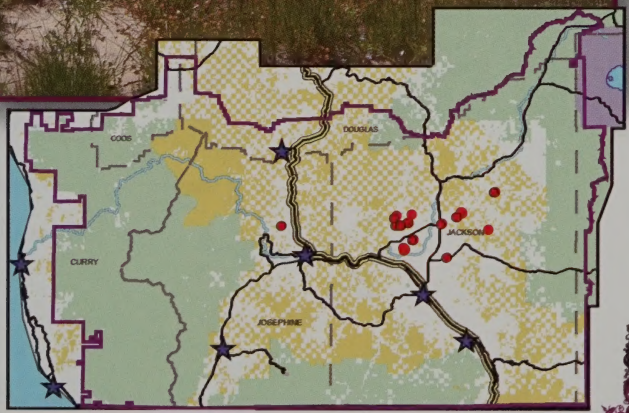
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Code: PLLA3

Scientific Name: *Plagiobothrys lamprocarpus* (Piper) I.M. Johnston

Family: Boraginaceae (borage family)

Common Name: Shiny-fruited allocarya

Plant Description: Stems erect 1-3 dm high. Leaves linear, 1-2 cm long, glabrous above, hispid below. Pedicels of individual flowers less than 1 mm long. Calyx lobes 1-2 mm long. Nutlets 1 or 2, 1.6 mm long, 1 mm broad.

Blooming Period: June.

Flower Color: White.

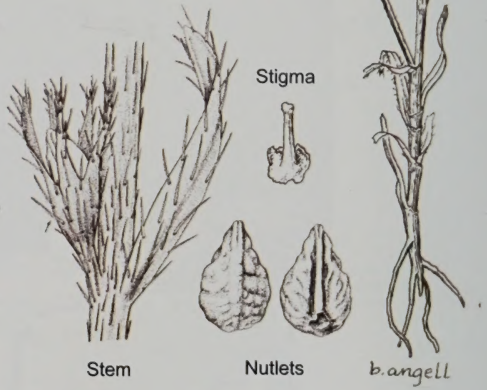
Distinguishing Characteristics: Annual. Mature fruits needed for identification. Scar on nutlet (where attached to the receptacle) less than 1/4 the length of the nutlet, not deep. Scar on the lower part of the inner face rather than directly basal. Nutlets shiny, dorsal side (side facing away from the stem) with low, broad, keeled ridges, without minute roughening. Nutlet apex more prominently keeled and incurved. Keel on the ventral side (side facing stem) of nutlet in a longitudinal groove. Stems simple or only sparingly branched. Calyx lobes not strongly ribbed. Racemes not in pairs. Pubescence of stem appressed. Corolla very small.

Similar Species: Many species in this genus share similar traits. However, the shiny nutlet with the ventral keel in a groove unlike any other *Plagiobothrys* in our region.

Habitat: Not well known. Probably open, vernally wet areas.

Distribution: Known only from the type collection "in moist places in an old road near Grants Pass" in 1921. Possibly extinct.

References: Abrams III-566 [Allocarya] Meinke 270



Illus: Meinke 271

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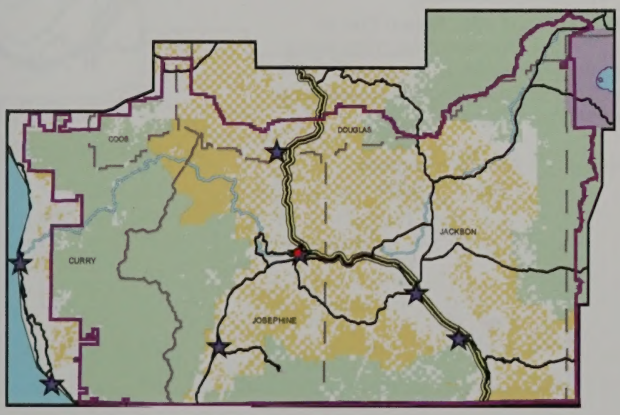


Code: PORH

Scientific Name: *Poa rhizomata* A.S. Hitchc.

Family: Poaceae (grass family)

Common Name: Timber bluegrass

Plant Description: Perennial from rhizomes, 30-60 cm. Leaf blades 1.5-3.5 mm wide, flat; ligules 2-8 mm long. Inflorescence 4-10 cm, ovate, sparsely flowered, branches 1-2 per node, tip nodding; callus cobwebby, lemma 4-6.5 mm, keel and marginal veins hairy; some plants have florets pistillate only.

Blooming Period: May - July.

Flower Color: N/A

Distinguishing Characteristics: Plants form open clumps from rhizomes, the ligules 2-8 mm long, the tip of the inflorescence droops, generally sparsely flowered, cobwebby callus, and lemmas possess hairy veins; ± dioecious.

Similar Species: *Poa piperi* may be confused with *P. rhizomata*, but it grows in tufts, the leaf blades are rolled, the ligules are around 1-2 mm, and the lemmas are glabrous to scabrous. *P. secunda* can be mistaken for *P. rhizomata*, but does not have rhizomes. *P. pratensis* is very similar and very common, but it has cobwebby lemmas and rhizomes, and plants and flowers are bisexual. Other perennial *Poa* species in this region may also be similar, but they typically have one or more of the following characteristics: smaller lemmas, hairy lemmas, or a glabrous callus.

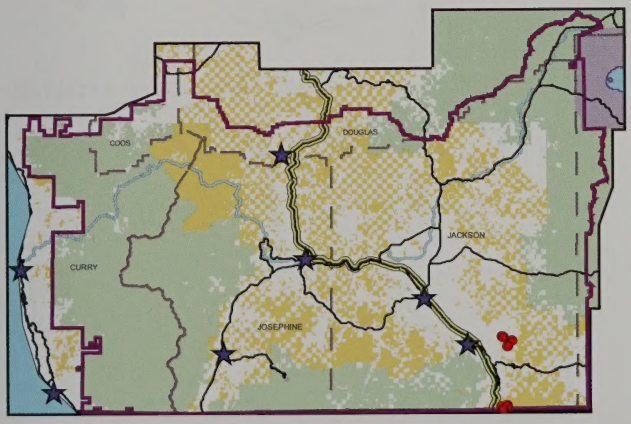
Habitat: Dry Douglas-fir/ponderosa pine forest.

Distribution: Lane and Jackson Cos. in Oregon: Oregon Mountain, West Fork Illinois; Cascade-Siskiyou National Monument, Dead Indian Memorial Road. In California occurs in Trinity and Siskiyou Cos.

Illus: Hitchcock & Chase 108

References:

Abrams	Jepson
I-203	1289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Code: POCA25

Scientific Name: *Polystichum californicum* (D. C. Eat.) Diels

Family: Dryopteridaceae (wood fern family)

Common Name: California sword-fern

Plant Description: Rhizome stout, almost erect. Fronds several, ascending, 3-11 dm long. Stalks 6-35 cm long, stout. Leaf blades 20-75 cm long, 5-20 cm broad. Primary pinnae (leaflets), generally 4-7 cm long.

Distinguishing Characteristics: Blade generally greater than 5 cm wide. Pinnae (or some of them) cleft more than halfway to the midrib, oblong or lanceolate in outline, spine-tipped.

Similar Species: *P. scopulinum* has blade less than 5 cm wide. Pinnae are narrowly deltoid in outline, pinnae tips are sharp, but not spine-tipped, and fronds only 1-4 dm long. *P. munitum* and *P. imbricans* do not have deeply cleft pinnae; however, these two species are known to hybridize with *P. californicum,* making this otherwise clear distinction difficult.

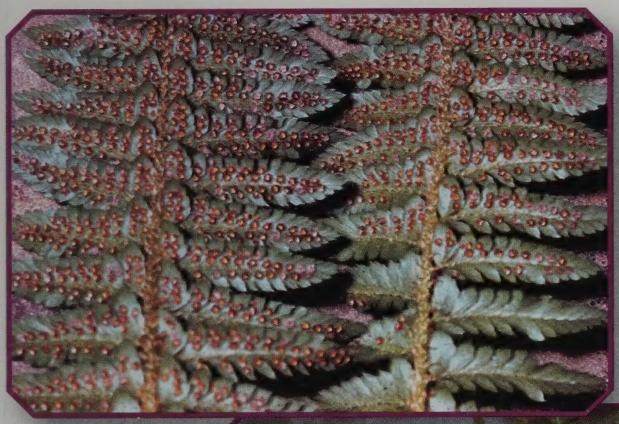
Habitat: Creek banks and canyons in redwood and mixed evergreen forests, rocky, open slopes, to 1,000 ft.

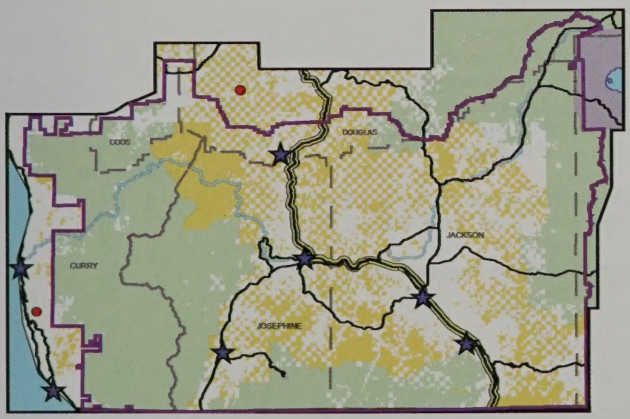
Distribution: Known from a few disjunct locations in Coos, Curry, Douglas, Linn Cos. of Oregon, and Washington. More abundant in California.

Illus: Hitchcock et al. I-88

References:

Abrams	H&C	HCOT	Jepson
I-11	53	I-87	92

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Code: RAAU

Scientific Name: *Ranunculus austro-oreganus* L. Benson

Family: Ranunculaceae (buttercup family)

Common Name: Southern Oregon buttercup

Plant Description: Perennial herb with a robust rootstock, slender and erect with one to few stems, 2-4 cm high, sparingly branched; leaves few, the lower cauline three-parted, blades 3-4 cm long, somewhat hairy above but long silky pubescent below. Petioles 5-10 cm long. Inflorescence branches few, oblong petals 1 cm long, light yellow or whitish within, purplish red veined dorsally; sepals villous; achenes to 4 mm long.

Blooming Period: April - May.

Flower Color: Yellow on upper surface, rust colored on lower surface.

Distinguishing Characteristics: Longer, silky pubescence on stems/leaves and very distinct rust-colored lines on back of petals.

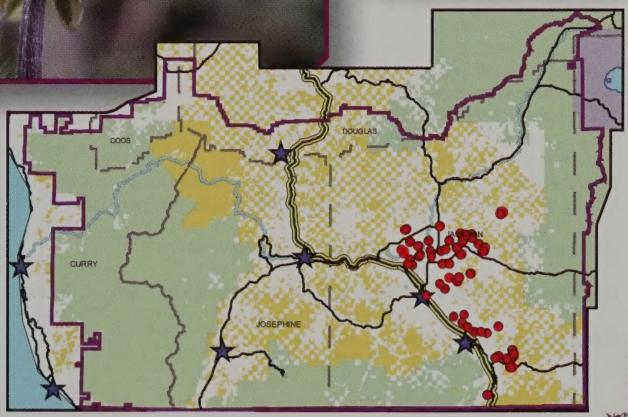
Similar Species: *Ranunculus occidentalis* looks very similar, and the two inter-breed frequently. However, *R. austro-oreganus* typically has 5 petals whereas *R. occidentalis* can have 6 or more, and the petals on *R. occidentalis* are the same yellow color on both sides. *R. orthorhyachus* also resembles *R. austro-oreganus* in petal color, but it grows in moist habitats.

Illus: Meinke 279

Habitat: On damp or dry grassy loam slopes, often among scattered oak, 1,500-2,000 ft.

Distribution: Endemic to central Jackson Co., Oregon.

References: Meinke 278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Code: RHCRI2

Scientific Name: *Rhamnus ilicifolia* Kellogg
(***Rhamnus crocea* ssp. *ilicifolia***)

Family: Rhamnaceae (buckthorn family)

Common Name: Redberry, holly-leaved buckthorn, red-berried buckthorn

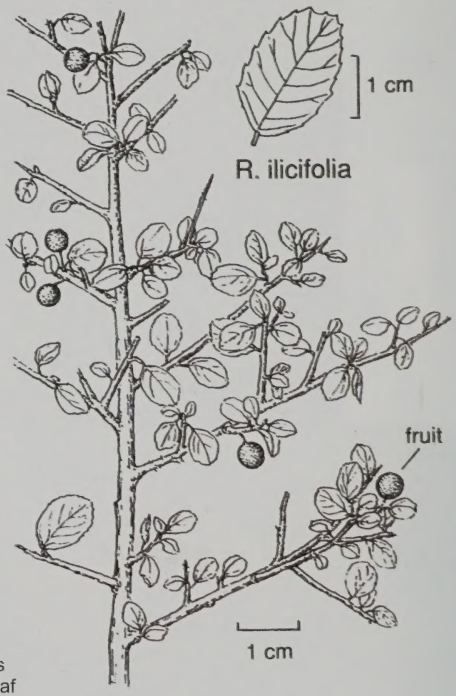
Plant Description: Shrub to small tree, less than 4 m. Bark gray with stiff, ascending branches, occasionally thorn-tipped, terminal bud covered in scales. Leaves evergreen, glabrous, leathery, dentate, ovate to round blade 20-40 mm, surface glabrous to hairy, lower side concave, veins not prominent. Flowers monoecious, inconspicuous, 4 yellowish-green sepals, without petals, style exserted. Fruits obovate, red and sweet, 2-stoned, 8 mm.

Blooming Period: March - June.

Flower Color: Sepals yellowish-green.

Distinguishing Characteristics: Chaparral shrub with dentate evergreen leaves (20-40 mm long), 4 inconspicuous sepals; no petals.

Similar Species: Coffeeberry, *Rhamnus californica*, is the only other buckthorn shrub with evergreen leaves present in our region. It has serrate leaf margins, petals, and an included style; terminal bud not covered in scales. In addition, *R. californica* has 5 sepals and petals, whereas *R. ilicifolia* has 4 sepals and lacks petals. *R. alnifolia* has deciduous alder-like leaves, 5 sepals and a 3-stoned fruit, but like redberry the terminal bud is covered in scales; it grows in wetter habitats. Cascara, *R. purshiana*, has thin deciduous leaves, prominent veins, and generally grows in coniferous forests. *Ceanothus* shrubs, also in the buckthorn family, have showy flowers with petals and capsules, not drupes.



Rhamnus crocea
- a similar species

Illus: Jepson 947

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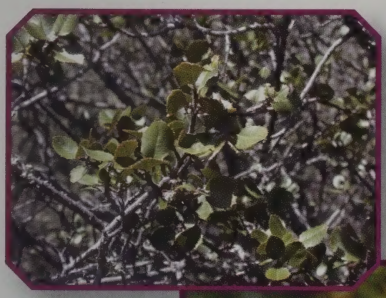
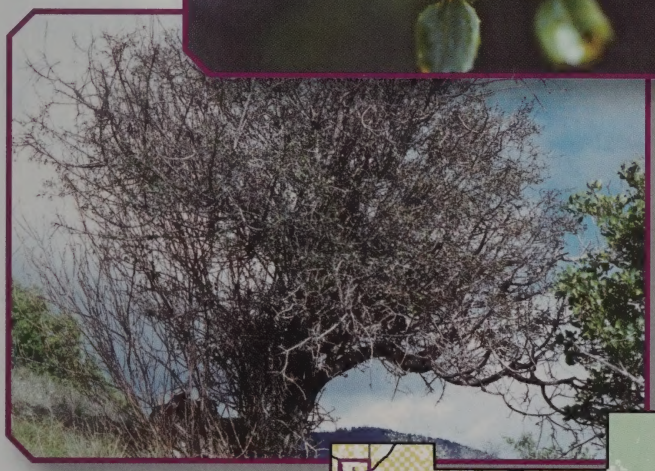
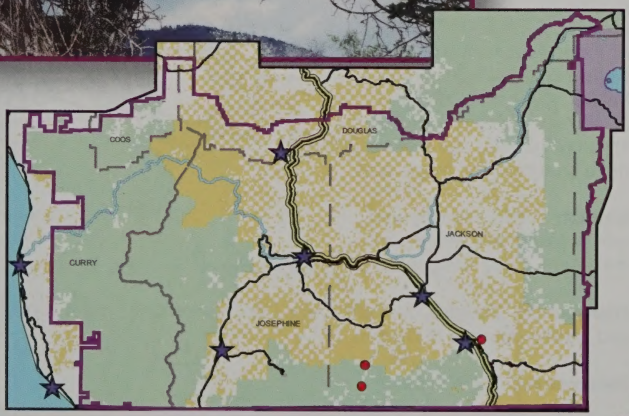
Habitat: Chaparral and oak woodlands below 5,000 ft.

Distribution: Jackson (and possibly Josephine) Co., Oregon; more common in California.

References: Abrams III-63 Jepson 940



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Code: ROTH

Scientific Name: *Romanzoffia thompsonii* V.M. Marttala

Family: Hydrophyllaceae (waterleaf family)

Common Name: Thompson mistmaiden

Plant Description: Bulbless annual, 2.5-18 cm tall, usually in aggregated clumps. Leaves slightly succulent, may be glaucous, some lower leaves opposite, upper alternate, blade ovate to obovate, entire to 3-5 lobed, 1-5 mm long. Inflorescence open, terminal cyme, 1 or 1-5 flowered. Calyx 1.5-2.5 mm, corolla funnel-shaped 4.5.5 mm, style length 0.7-1.3 mm.

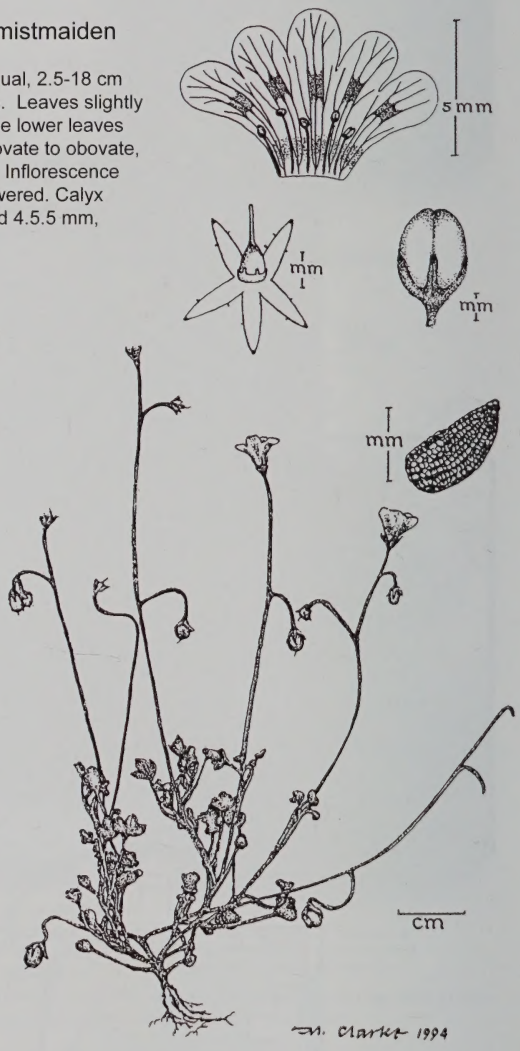
Blooming Period: June - July.

Flower Color: White with yellow or gold band in throat and gold spots at lobe bases.

Distinguishing Characteristics: The only mistmaiden in North America with the following characteristics: an annual with a bulbless habit; some lower leaves opposite; and with some basal leaves entire. Another feature possibly unique to this species is the petals have five gold spots at the lobe bases.

Similar Species: *R. californica* is quite similar, but the corolla is about twice the size of *R. thompsonii* and it has longer styles (3.5-6 mm) and narrower capsules. *R. thompsonii* and *R. californica* grow together at about 20% of known sites, but *R. thompsonii* is found in the wettest areas of the shared habitat . Even more similar, *R. sitchensis* also has longer styles (2.3-5 mm) and it grows in more protected and mesic sites.

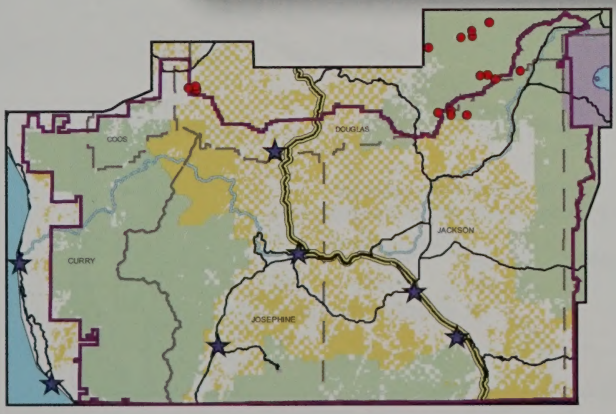
Habitat: Sunny, vernally wet, mossy (especially with *Bryum miniatum*), rocky hillsides at 750-6000 ft.



Illus: M. Clarke

Distribution: Douglas, Jackson, Lane, Linn, Marion Cos., in the Cascade Mtns. and western foothills of Oregon.

References: Not in Floras.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Code: ROCO

Scientific Name: *Rorippa columbiae* (Suksdorf ex B.L. Robins.) Suksdorf ex T.J. Howell
(Rorippa calycina)

Family: Brassicaceae (mustard family)

Common Name: Columbia cress

Plant Description: Low-spreading rhizomatous perennial, spreading stems 10-40 cm. Leaves lobed to divided, lower leaves on petiole, 2.5-7.5 cm long. Flowers in short racemes, sepals tend to persist after flowering, petals pale yellow, 4 mm long. Seed pods widely oblong and finely hairy, 3-6 mm long, ascending to erect, usually somewhat curved.

Blooming Period: June - October.

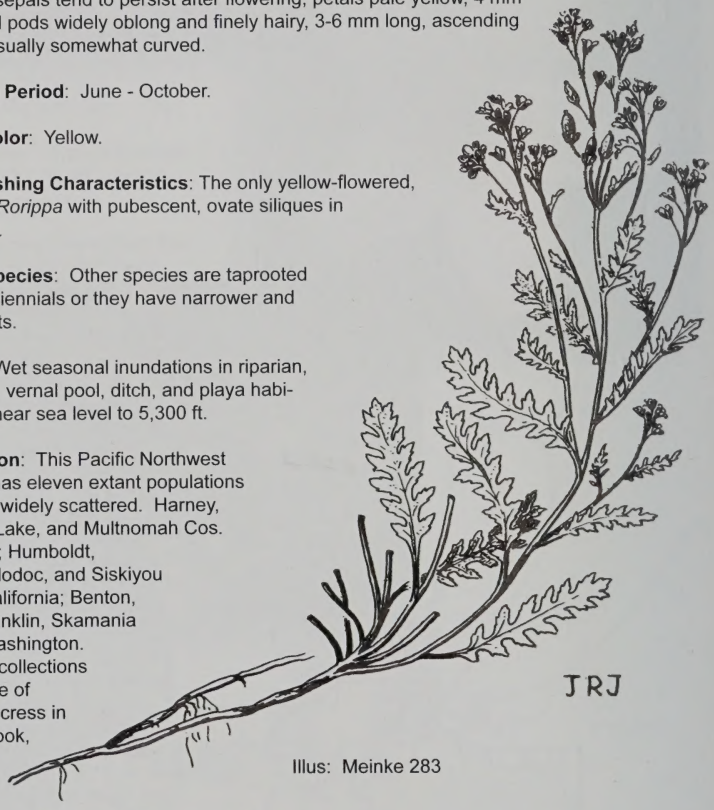
Flower Color: Yellow.

Distinguishing Characteristics: The only yellow-flowered, perennial *Rorippa* with pubescent, ovate siliques in our region.

Similar Species: Other species are taprooted annuals/ biennials or they have narrower and longer fruits.

Habitat: Wet seasonal inundations in riparian, lakeshore, vernal pool, ditch, and playa habitats from near sea level to 5,300 ft.

Distribution: This Pacific Northwest endemic has eleven extant populations which are widely scattered. Harney, Klamath, Lake, and Multnomah Cos. in Oregon; Humboldt, Lassen, Modoc, and Siskiyou Cos. in California; Benton, Grant, Franklin, Skamania Cos. in Washington. Historical collections were made of Columbia cress in Baker, Crook, and Jackson Cos. in Oregon. In 1916, Morton Peck collected a specimen in the Mt. Pitt (Mt. McLaughlin) area.

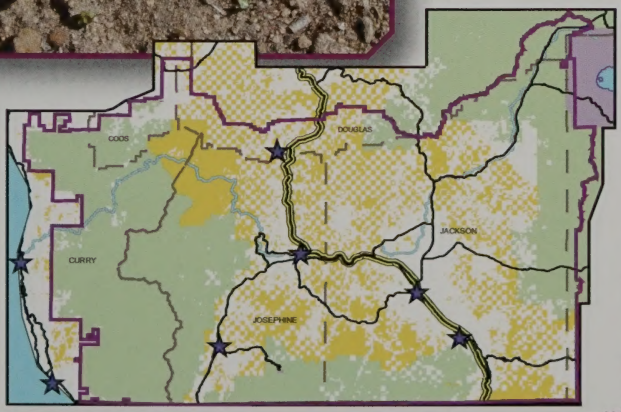


Illus: Meinke 283

References:

Abrams	HCOT	Meinke
II-298	II-535	282

(*R. calycina* var. *calycina*)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Code: SADE2

Scientific Name: *Salix delnortensis* Schneid.

Family: Salicaceae (willow family)

Common Name: Del Norte willow

Plant Description: Shrub to about 2 m high. Young branches gray, covered with densely matted soft hair. Leaves 1.5-8 cm long, 1-1.5 cm wide, densely hairy and wrinkled beneath, less on upper surface. Male flower cluster 1.5-2.5 cm long, 0.5-0.7 cm wide and the female 3-5 cm long, 0.8-1 cm wide.

Blooming Period: April - May.

Flower Color: Catkins; no petals or sepals, anthers purplish.

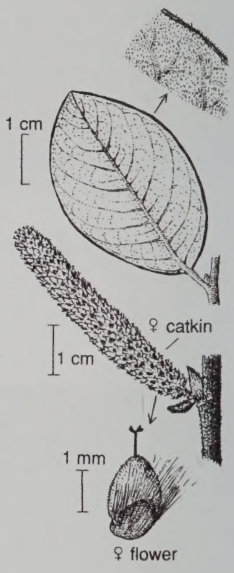
Distinguishing Characteristics: Male and female flowers appearing with the leaves. Leaves pubescent, paler beneath, relatively broad. Twigs generally hairy, young branches covered with densely matted soft hair (also found in *S. lasiolepis*). Stamens 2.

Similar Species: *S. breweri* is similar, but has longer leaves, 3-6 cm long. *S. sitchensis* has single stamen. *S. scouleriana* has tapering capsules and short style branches.

Habitat: Streambeds, streambanks, and gullies on serpentine. Habitat may be dry in summer. Low elevations up to 1,500 ft.

Distribution: Curry and Josephine Cos. in Oregon, and Del Norte and Siskiyou Cos. in California.

References: Abrams I-504 Jepson 996



Illus: Jepson 999

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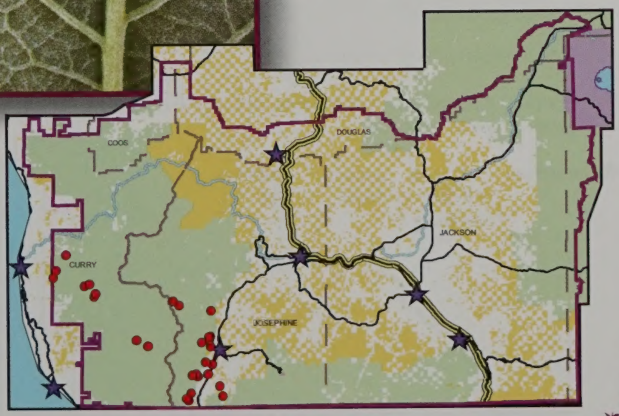
COOS
DOUGLAS
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CURRY
JOSEPHINE

Code: SAFR5

Scientific Name: *Saxifragopsis fragarioides* (Greene) Small

Family: Saxifragaceae (saxifrage family)

Common Name: Strawberry saxifrage

Plant Description: Perennial with woody root-crown, branched; stem thick, woody, trailing. Leaves basal, a few cauline leaves turning into sessile, linear bracts. Petiole 1.5-4 cm, base expanded, membranous; leaf blade 1.5-4 cm, jointed to petiole and falling from leaf, wedge-shaped, teeth coarse. Inflorescence has greater than 40 flowers; calyx lobes reflexed in age, 2-3 mm; petals 2-3 mm, stamen 10, pistil 1. Fruit is a capsule, 4-5 mm long.

Illus: Abrams II-356

Blooming Period: July - August.

Flower Color: White.

Distinguishing Characteristics: Woody root crown (caudex). In flower, styles are fused at base, 10 stamen present. Shape of basal leaves broadly cuneate, leaf blade jointed to and falling before petiole. At a causal glance, the leaves resemble the leaflets of strawberry (*Fragaria*).

Similar Species: Only species in this genus. Similar to *Saxifraga* spp., but this genus does not have the woody root-crown. Also many *Saxifraga* spp. have petal spots, and those growing in similar rocky habitat have a superior ovary (compared to a mostly half interior ovary in *Saxifragosis fragariodes*).

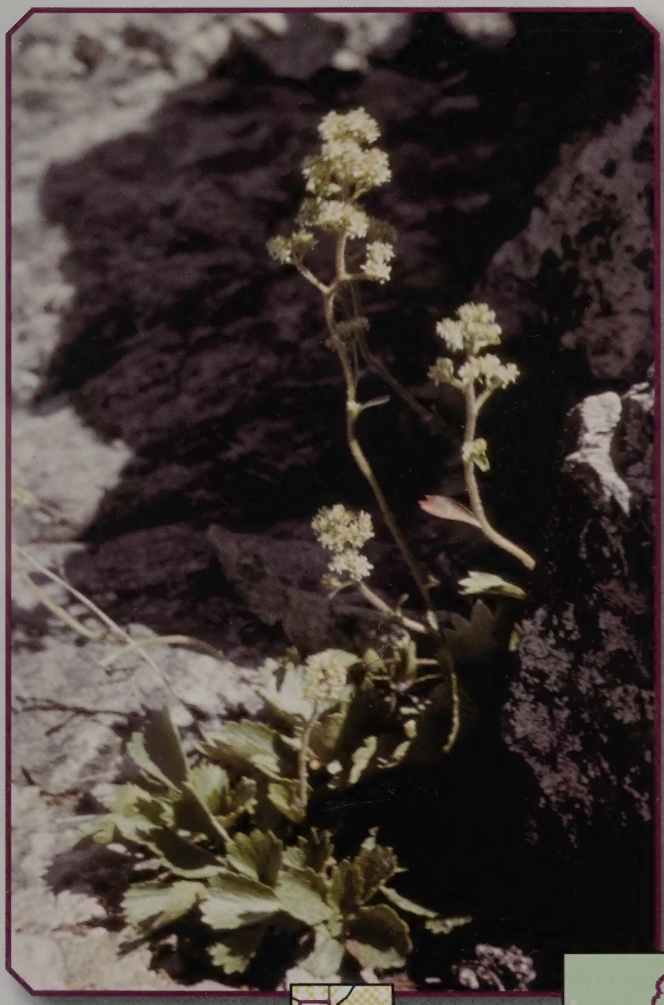
Habitat: Rocky crevices, 4,500-9,000 ft.

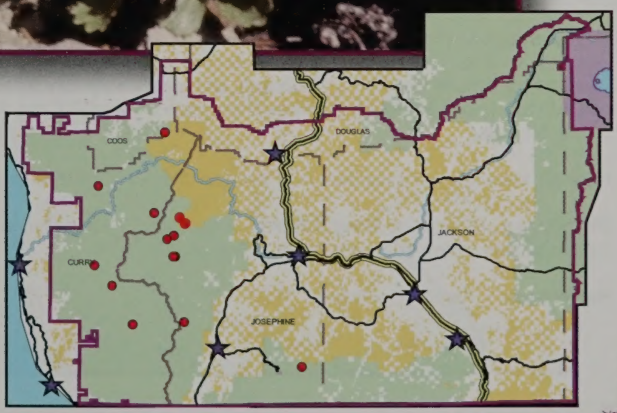
Distribution: Located in Klamath Mtns. of Curry and Josephine Cos. in Oregon; also in California, and Washington.

References:

Abrams	Jepson	Eastman
*II-359	1010	142

**Saxifraga f.*

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Code: SCPE4

Scientific Name: *Scirpus pendulus* Muhl.
(S. lineatus)

Family: Cyperaceae (sedge family)

Common Name: Drooping bulrush

Plant Description: Perennial, 50-100 cm, with thick rhizome. Stems erect, 1-few, tuffed, 0.6-10 mm wide, 3-angled. Leaves basal and cauline, sheaths prominent; blades less or equal to sheaths, flat, 4-8 mm wide, glabrous, and rough-margined. Inflorescence panicle-like; spikelets 50+, more or less stalked, 5-10 mm, 2-3 mm wide, cyclindric; longest bract 2-5 (8) cm, leaf-like; flower bract around 1.5-2 mm, more or less glabrous, brown. Perianth bristles generally six, unequal, twice the size of the fruit, style branches 3. Fruit 1-1.5 mm, 3-angled, short tipped, and narrowered at both ends.

Illus: Abrams I-277

Blooming Period: N/A

Flower Color: N/A

Distinguishing Characteristics: Spikelets numerous, in a drooping panicle, small at 1-3.5 mm wide, and somewhat stalked. Perianth-bristles generally 6, much longer than seed, smooth, entangled. Involucre usually has 2 leaves/bracts.

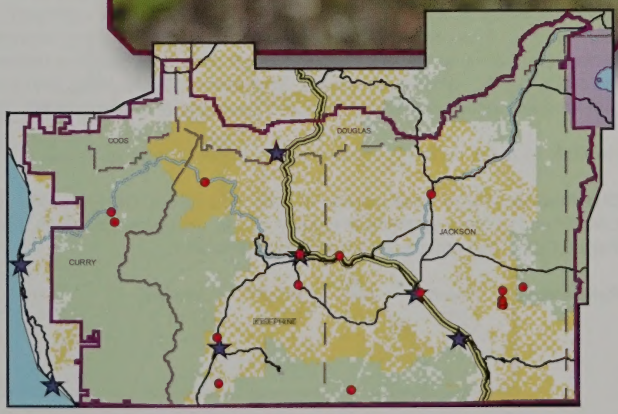
Similar Species: Both *Scirpus congdonii* and *S. microcarpus* have spikelets mostly clustered in heads. In addition, both species have perianth bristles about as long as the seed (they are much longer in *S. pendulus*), and are weak, flexuous and mostly downward barbed. *S. microcarpus* has 2 style-branches, while *S. pendulus* and *S. congdonii* have 3 style-branches.

Habitat: Marshes, wet meadows, river terraces, ditches. Sea level to 3,000 ft.

Distribution: Clackamas, Curry, Jackson, Josephine, Linn and Marion Cos. in Oregon. In California, only known from near Yreka in Siskiyou Co.

References:

Abrams	Jepson
1-277	1148
S. lineatus	


COOS
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JOSEPHINE

Code: SCSU

Scientific Name: *Scirpus subterminalis* Torr.

Family: Cyperaceae (sedge family)

Common Name: Water clubrush

Plant Description: Plants 20-140 cm. Stems less than 1 mm wide, cylindric. Leaf sheath less than 1/2 stem. Spikelet 1, 6-13 mm long, 4-7 mm wide.

Blooming Period: July - August.

Flower Color: N/A

Distinguishing Characteristics: Aquatic perennial. Slender, limp stems and leaves, not self-supporting, floating in water or lying on bottom if water has receded late in the year. Spikelet solitary, with an involucral bract longer than the spikelet (sometimes making the spikelet appear lateral rather than terminal).

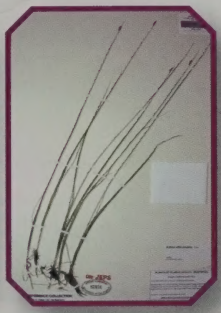
Illus: Abrams I-272

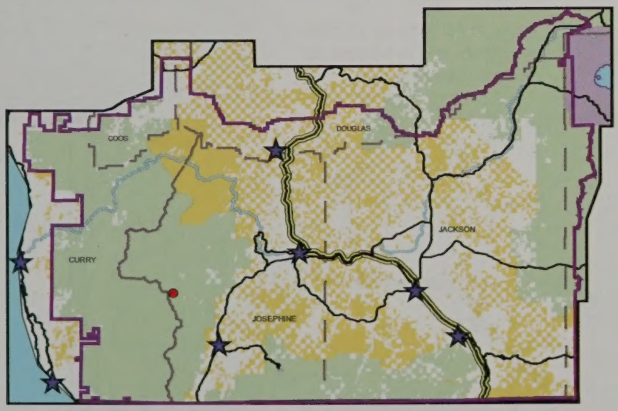
Similar Species: The non-supportive stems and leaves, with a solitary spikelet subtended by an obvious bract, are unique in the genus *Scirpus*. No other *Scirpus* in our area is truly aquatic, although most are wetland species and often emergent in standing water. *Scirpus* is distinguished from other members of the sedge family by perfect flowers, achenes not wrapped in a perigynium or similar structure, spirally arranged spikelets scales, styles not dilated at base, or persistent as a distinct tubercle (small wart-like projection) on the achene (*Scirpus* achenes may still be distinctly tipped), flower bristles 0-6 and not longer than the spikelet scales (except much longer in *S. criniger* [*Eriophorum criniger*]). Members of the rush family (Juncaceae) have perfect flowers but with a regularly arranged 3 or 6-parted perianth (as opposed to the single scales and perianth reduced to bristles, or absent, in the sedge family). When not in flower, *Sperganium* (Typhaceae), with limp, long, linear (but broader) leaves which float, can also resemble *S. subterminalis*.

Habitat: In quiet, relatively shallow water. Lakes, ponds, marshes.

Distribution: A very small number of California sites in Del Norte, Humboldt, and Plumas Cos. Rare but more common in Oregon (Coos, Josephine, Klamath, Lake, Lane, Linn, and Wasco Cos.), and other northern and Atlantic states.

References:	Abrams	H&C	HCOT	Jepson
	I-272	601	I-383	1148




COOS
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Code: SEMO5

Scientific Name: *Sedum moranii* Clausen

Family: Crassulaceae (stonecrop family)

Common Name: Rogue River stonecrop

Plant Description: 1.5-2.5 dm high. Corolla 12-15 mm. Numerous stem leaves 1-1.5 cm long, mostly basal. Cymes are three-parted.

Blooming Period: May - June.

Flower Color: Greenish yellow.

Distinguishing Characteristics: Flowering stems reddish-purple; inflorescence densely glandular (sticky) and minutely pubescent.

Similar Species: Similar to other Sedums, but glandular inflorescence and distinctively reddish-purple color of flowering stem should separate it from other species.

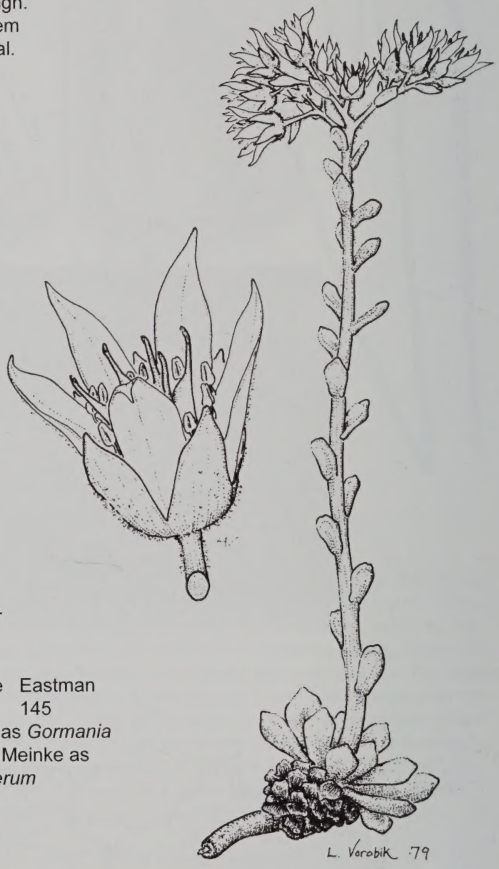
Habitat: Rock outcrops in lower canyons. Found on greenstone outcrops on west or southwest slopes.

Distribution: Along Rogue River canyon, Josephine Co., Oregon.

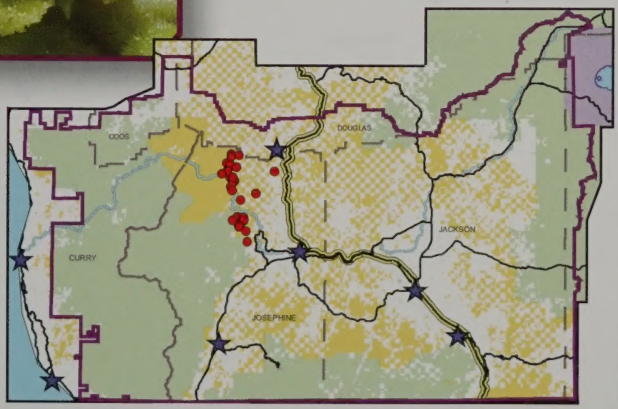
References:

Abrams	Meinke	Eastman
*II-343	*290	145

*listed in Abrams as *Gormania glandifera* and in Meinke as *Sedum glanduliferum*



Illus: Meinke 291


COOS
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JACKSON
JOSEPHINE

Code: SEOB3

Scientific Name: *Sedum oblanceolatum* Clausen

Family: Crassulaceae (stonecrop family)

Common Name: Applegate stonecrop

Plant Description: Succulent perennial herb. Stems 6-15 cm high, slender. Rosette and upper stem leaves glaucous, basal leaves cuneate, 10-18 mm long; stem leaves 22 mm long and 6 mm wide. Sepals 5-6 mm long. Petals cream or pale yellow, lobes erect, 10-12 mm long. Anthers yellow.

Blooming Period: June - July.

Flower Color: Cream or pale yellow.

Distinguishing Characteristics: Entire plant very glaucous, and leaves (especially basal) are squared-off.

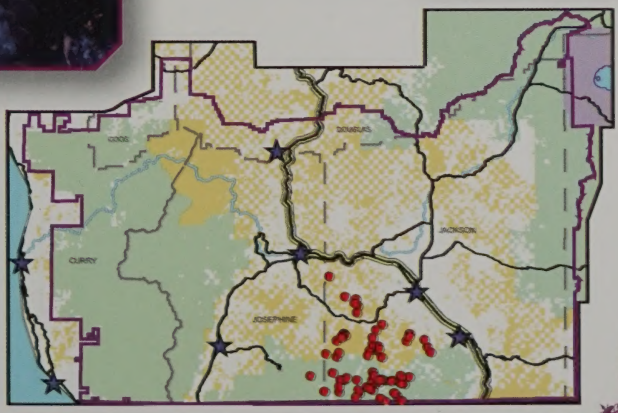
Similar Species: No other *Sedum* in our area as glaucous as *S. oblanceolatum*. Those somewhat glaucous include *S. obtusatum*, *S. laxum*, and *S. spathulifolium*. *S. obtusatum* has yellow flowers, loose rosettes, and does not have yellow anthers. *S. laxum* subspecies all usually have pink flowers and red-brown to purplish-black anthers. *S. spathulifolium* has yellow flowers.

Habitat: Dry, non-serpentine rock outcrops to 5,700 ft.

Distribution: Known from Jackson and Josephine Cos., Oregon.

References: Jepson 532 Meinke 292

Illus: Meinke 293


DOUGLAS
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Code: SEHE2

Scientific Name: *Senecio hesperius* Greene

Family: Asteraceae (sunflower family)

Common Name: Western senecio, Siskiyou butterweed

Plant Description: Single stem, 0.7-1.5 dm tall. Basal leaves 1-3 cm long, 0.5-2 cm wide. Stem leaves few, progressively smaller to the top. Ray (petal shaped) flowers 6-10 mm long.

Blooming Period: April - June.

Flower Color: Yellow.

Distinguishing Characteristics: Short lived perennial. Lightly tomentose. Inflorescence has 1-5 flower heads. Involucral bracts often reddish tipped.

Similar Species: The only few headed *Senecio* with strictly basal, crenate leaves and a hint of persistent densely-matted pubescence which could be expected on serpentine outcrops in southwest Oregon.

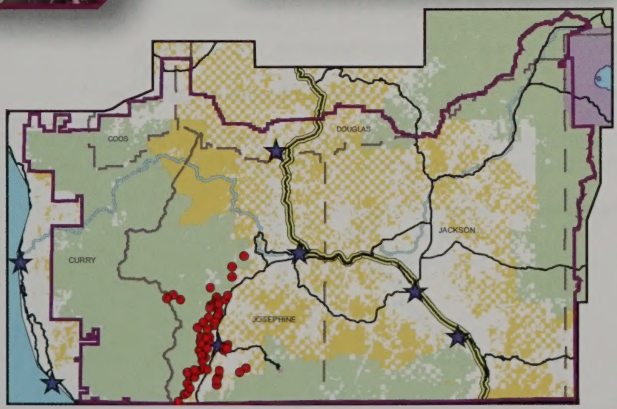
Habitat: Found on serpentine soils at lower elevations (< 2,500 ft.), on gentle to moderate slopes. Generally in open Jeffery pine savannah.

Distribution: Endemic to the Illinois Valley area (north to Cedar Log Flat) of the Siskiyou Mtns., southern Josephine Co., Oregon.

References:

Abrams	Meinke	Eastman
IV-444	296	147

Illus: Meinke 297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Code: SIHIN

Scientific Name: *Sidalcea hickmanii* Greene **ssp.** ***nova***

Family: Malvaceae (mallow family)

Common Name: Hickman's southern Oregon checker bloom

Plant Description: Shrub 40-80 cm tall, densely stellate-canescent. Leaves fan-shaped, wider than long, 1-5 cm wide, coarsely crenate-dentate. Inflorescence often compound, glomerate to elongate, the lowest flowers in axils of reduced foliage leaves; bracts at pedicel base linear to oblong, equal or slightly shorter than calyx, bractlets below calyx 3, linear, 4-7 mm long, ± equal to calyx. Calyx 6-8 mm, lobes ovate, densely stellate with hairs on margins longer than on back, petals 8-15 mm long. Carpels 2-2.5 mm, shallowly corrugate-reticulate on back.

Illus: Abrams III-108 (sp. only)

Blooming Period: June.

Flower Color: White to pale pink.

Distinguishing Characteristics: Shrubby plant with fan-shaped leaves, dense stellate pubescence and dense racemes of large white (sometimes light pink) flowers.

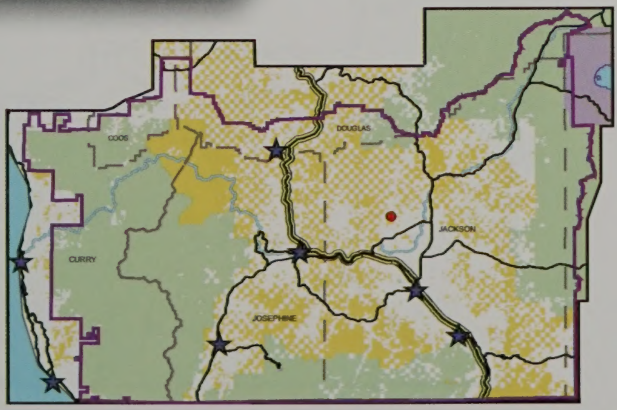
Similar Species: No other similar species in southwest Oregon. In California, there are four subspecies of *S. hickmanii*; the closest to ours is *S. hickmanii* ssp. *hickmanii,* which occurs in Monterrey Co. and has linear bracts much shorter than the calyx as well as bractlets shorter than the calyx. The other subspecies differ in shape of bract, density of pubescence, and leaf lobing.

Habitat: Dry chaparral on ridgelines. Responds well to fire.

Distribution: One site in Oregon near Sam's Valley in Jackson Co. In California, the four other subspecies of *S. hickmanii* occur from Marin Co. to San Bernardino Co.

References:

Abrams	Jepson
III-97	758
[.....sp. only.....]	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Code: SIMA

Scientific Name: *Sidalcea malachroides* (Hook. & Arn.) Gray

Family: Malvaceae (mallow family)

Common Name: Maple-leaved sidalcea

Plant Description: 4-15 dm high, stout. Leaves 2-8 cm wide. Bracts beneath flowers narrow, 4-6 mm long. Calyx 6-9 mm, generally purplish. Petals about 7-15 mm long.

Blooming Period: May - July.

Flower Color: White, or purplish-tinged.

Distinguishing Characteristics: Slightly woody perennial. Stems covered with stiff hairs. Leaves grape or maple shaped, shallowly lobed, evenly arranged on stem. Flower cluster dense and bracts purplish.

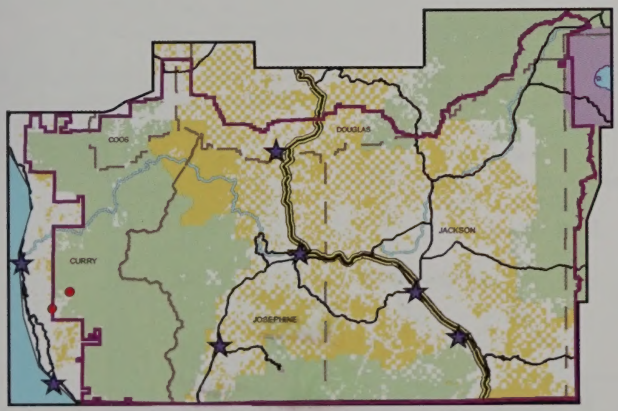
Similar Species: Distinguished from other *Sidalcea* by leaf shape.

Habitat: Woodlands and clearings along the coast, below 2,000 ft.

Distribution: In Oregon collected twice along the Pistol River in Curry Co. by Lilla Leach (1929, 1938). Occurs in California, south to Monterey Co.

Illus: Abrams III-108

References: Abrams III-97 Jepson 758


COOS
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JOSEPHINE

Code: SIMAP

Scientific Name: *Sidalcea malviflora* (D.C.) Gray ex Benth.
ssp. *patula* C.L. Hitch.

Family: Malvaceae (mallow family)

Common Name: Coast checker bloom, Siskiyou checker bloom

Plant Description: Stems 5-9 dm, sparsely bristly and mostly stellate (star-shaped hairs). Leaves coursely bristly and generally stellate hairs. Flower pedicels 3-10 cm long. Petals 10-20 mm. Fruit segment 3.5-4 mm, mostly glabrous.

Blooming Period: May - July.

Flower Color: Bright pink, often white-veined.

Distinguishing Characteristics: Inflorescence dense, narrow; flowers stiffly erect. Lowest flowers often in leaf axils. Calyx sparsely hairy. Plant often 5-9 dm; stems, with some stellate hairs, often trailing and rooting.

Similar Species: Other subspecies of *S. malviflora* have less congested racemes, often with flowers strung individually along the stem, articularly on the lower or older parts of the inflorescence. *S. oregana, S. setosa*, and *S. cusickii* have more dense and tight spike-like racemes, but with pedicels rarely over 3 mm.

Illus: Abrams III-108 (sp. only)

Habitat: Coastal. Open woodlands, openings within mixed forests, meadows or grassy places, at low elevations, often serpentine.

Distribution: Coastal plains and outer Coast Range Mtns. from Coos and Curry Cos. in Oregon to Humboldt Co. in California. Known in California from fewer than 10 occurrences, and 6 in Oregon.

References: Abrams III-105 [...sp. only...] Jepson 759

COOS
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JOSEPHINE

Code: SIHOB

Scientific Name: *Silene hookeri* Nutt. **ssp.** *bolanderi* (Gray) Abrams

Family: Caryophyllaceae (pink family)

Common Name: Bolander's catchfly

Plant Description: Upright part of stems 0.5-1.5 dm long. Leaves 4-7 cm long, 8-14 mm broad. Flower cluster 1-9 flowered with pedicels 1-4 cm long. Calyx (collective sepals) tubular, 13-20 mm long, the lobes 4-7 mm long. Petals 35-40 mm long, blade of petal 20-25 mm long.

Illus: Abrams II-164 sp. only

Blooming Period: May - June.

Flower Color: White to pink or violet.

Distinguishing Characteristics: Leaves somewhat grayish. Petals dissected. Petal lobes linear, all about the same length and width.

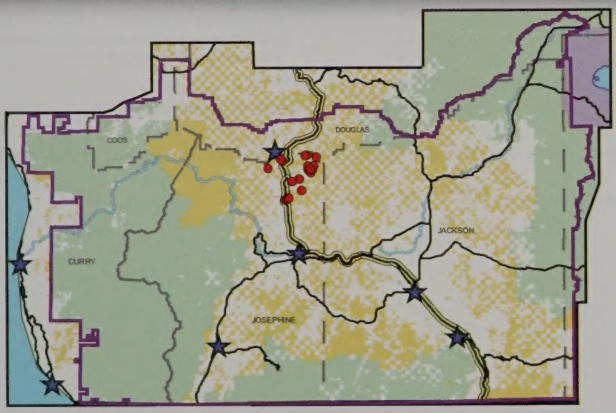
Similar Species: *S. hookeri* ssp. *hookeri* similar, but with petal blades only 10-12 mm (up to 15-18 mm) long, the middle two larger than the lateral two.

Habitat: Oak woodland, rocky knolls and slopes, often on serpentine, below 5,000 ft.

Distribution: Curry and Josephine Co., Oregon; northwestern California.

References:

Abrams	H&C	HCOT	Jepson	Eastman
II-162	118	I-287	491	152
[.....sp. only.....]				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Code: SOPA

Scientific Name: *Solanum parishii* Heller

Family: Solanaceae (nightshade family)

Common Name: Parish's horse-nettle, Parish's nightshade

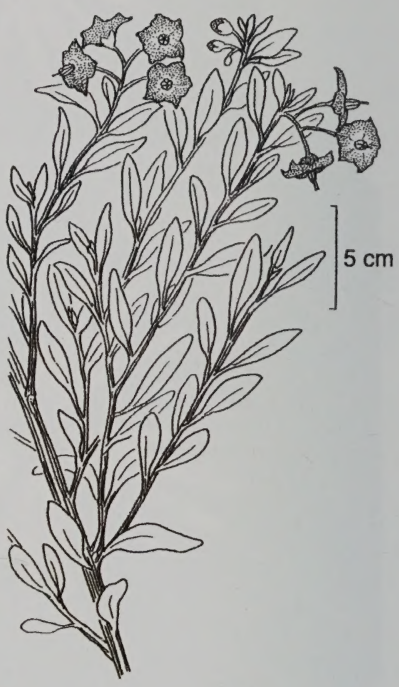
Plant Description: Perennial to subshrub, glabrous to sparsely hairy, angled to ribbed stem. Leaves, lanceolate to elliptic, tapered to base, 2-7 cm. Inflorescence umbel-like, pedicels 12-18 mm. Calyx 4 mm; corolla 17-22 mm wide, lobes smaller than tube. Anthers 3.5-5 mm. Berry 7-10 mm diameter, green to dark purple, cherry tomato-like shape.

Blooming Period: April - July.

Flower Color: Blue-purple (occasionally white).

Distinguishing Characteristics: Glabrous to sparsely hairy ridged stem.

Similar Species: *S. umbelliferum* is a perennial to subshrub growing in similar habitats, but the upper stem is clearly hairy and the flower lobe may have greenish spots at base. *S. americanum* has white flowers that are deeply lobed (lobes >> tube), reflexed in fruit, and 3-6 mm wide, with ovate leaves, sometimes coarsely toothed. *S. sarrachoides*, a weed favoring disturbance, is glandular and has ovate leaves, a deeply-lobed white corolla, and yellow fruit.



Illus: Jepson 1079

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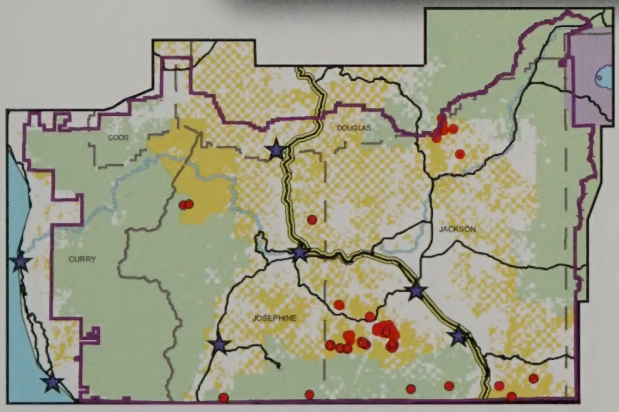
Habitat: Buckbrush chaparral, oak/pine woodlands, meadows and brush land in dry Douglas fir or Oregon oak communities. Also present in young conifer plantations and along road banks. Populations appear to respond positively to fire.

Distribution: Curry, Jackson, Josephine Cos. in Oregon; and south to Baja, California.

References: Jepson 1077


COOS
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JOSEPHINE

Code: SOLE3

Scientific Name: *Sophora leachiana* M.E. Peck

Family: Fabaceae (legume family)

Common Name: Western sophora

Plant Description: Flowering stems 3-4 dm high. Leaves pinnately compound, 10-20 cm long, leaflets elliptic-oblong, 1-2 cm long. 20-50 flowers, petals 9-12 mm long, clustered in a 7-15 cm long raceme.

Blooming Period: April - June.

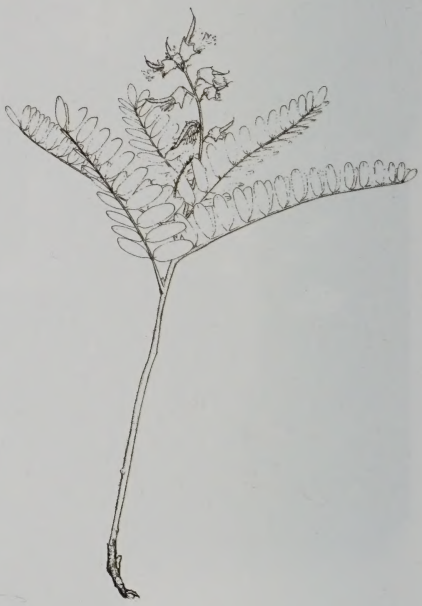
Flower Color: Yellowish-white to greenish-white.

Distinguishing Characteristics: Leaves and stems covered with soft gray hairs. Inflorescence terminal on stem. Immature fruits (pods) curved strongly upward and covered with silvery hairs. Mature fruits are more often straight or slightly upwardly curved.

Similar Species: Only species of *Sophora* in the Pacific Northwest.

Habitat: Typically found on south or west slopes. Requires disturbance and an open, sunny habitat within mixed evergreen-oak woods. Occasionally in clear cuts.

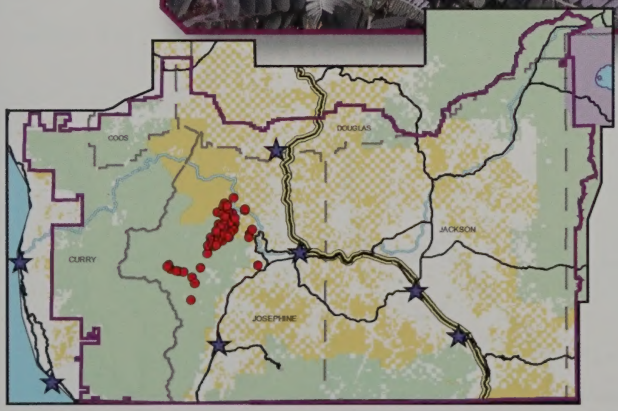
Distribution: Josephine Co., Oregon. Only known from an area 20 mi. by 6 mi. between the Rogue River Canyon and the Illinois River Canyon except for one site north of the Rogue River.



Illus: Meinke 313

References:

Meinke	Eastman
312	155


COOS
DOUGLAS
CURRY
JACKSON
JOSEPHINE

Code: STHO

Scientific Name: *Streptanthus howellii* S. Wats.

Family: Brassicaceae (mustard family)

Common Name: Howell's streptanthus

Plant Description: Plant 3-7 dm high; stems 1-few. Leaves fleshy, 2-10 cm long. Racemes 1-3 dm long. Sepals 5-7 mm; petals 8-10 mm. Fruit 5-8 cm long, 2.5-3.5 mm wide.

Blooming Period: July - August.

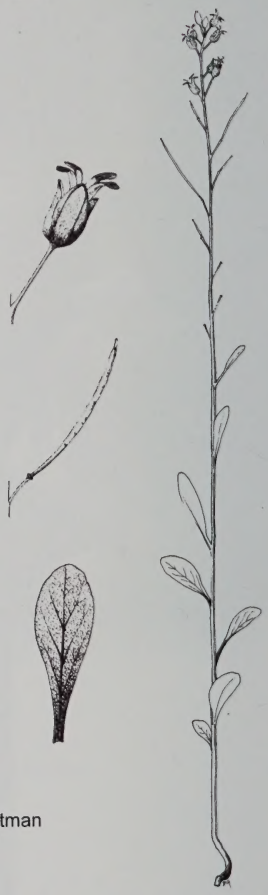
Flower Color: Petals purple at tip, yellow below, sepals purple.

Distinguishing Characteristics: Leaves petioled or not clasping stem. Lower ones stalked, sometimes toothed; upper ones narrower and lacking basal lobes. The flattened fruit, bractless inflorescence, and nonclasping leaves should serve to distinguish *S. howellii*.

Similar Species: The leaves of other *Streptanthus* species clasp the stem at their bases, unlike *S. howellii*.

Habitat: Dry, rocky, serpentine slopes in open conifer/hardwood forests from 1,000 to 4,500 ft.

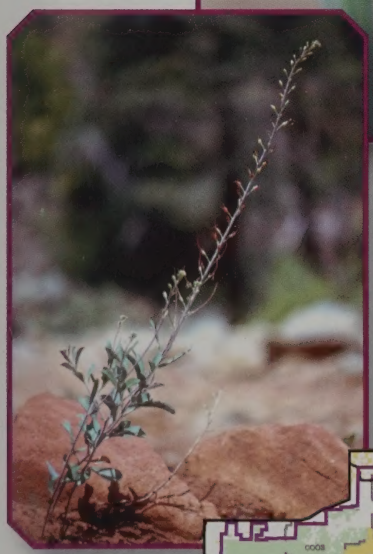
Distribution: Siskiyou Mtns.; Josephine and Curry Cos. in Oregon; Del Norte Co. in California.

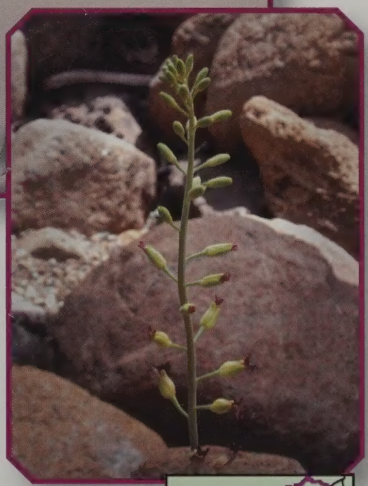


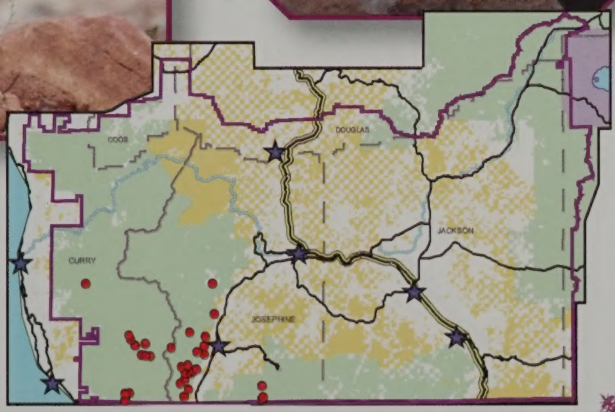
References:

Abrams	H&C	Meinke	Jepson	Eastman
II-243	178	314	443	157

Illus: Meinke 315






COOS
DOUGLAS
JACKSON
CURRY
JOSEPHINE

Code: TAHO2

Scientific Name: *Tauschia howellii* (Coult. & Rose) J.F. Macbr.

Family: Apiaceae (carrot family)

Common Name: Howell's tauschia

Plant Size: 4-8 cm high. Leaves 1.5-3 cm long; leaflets 5-15 mm, oblong to ovate.

Blooming Period: June - July.

Flower Color: Yellow petals.

Distinguishing Characteristics: Umbels have 3-5 rays (stems branch out in compound umbel), usually with one or two sessile umbels. One or 2 hairless, rather thick parsley-like leaves; leaflets irregularly sharped toothed, glaucous.

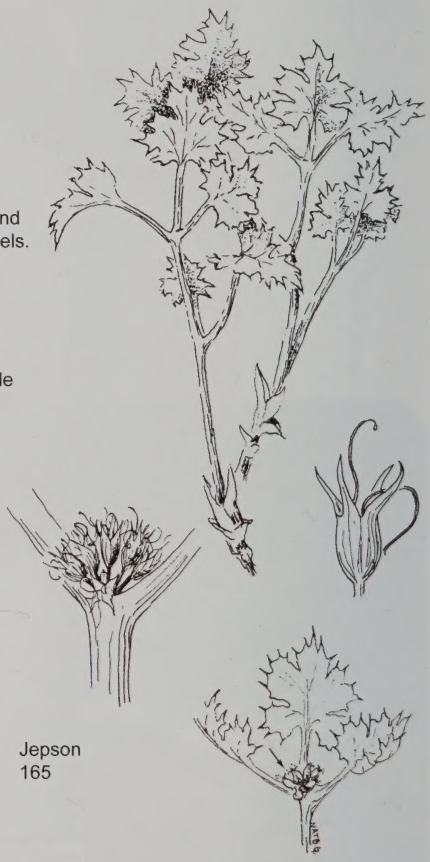
Similar Species: Distinguished from other *Tauschia* spp. by sessile umbels and multiple stems from a divided caudex. Difficult to confuse with other taxa. The most similar species is *T. glauca*, which has an umbel on a distinct petiole, and is not nearly as glaucous.

Habitat: Seems to prefer dry, exposed ridges in gravelly granite and serpentine flats, in coniferous forests at high elevations.

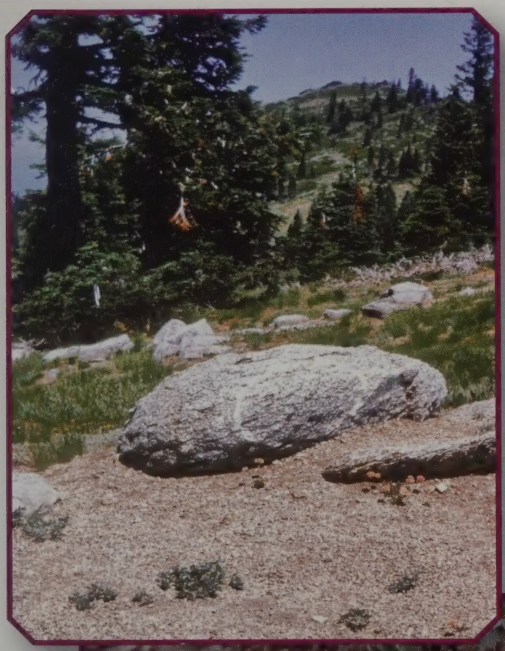
Distribution: Siskiyou Mtns., Jackson Co. in Oregon, and a few occurrences in Siskiyou Co.,California, 6,600-7,100 ft.

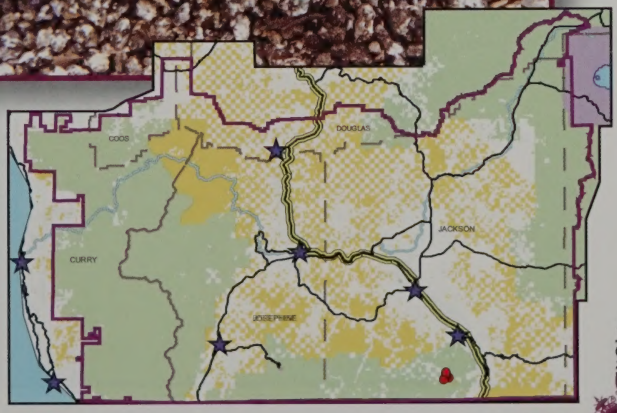
References:

Abrams	H&C	Meinke	Jepson
III-243	338	320	165



Illus: Meinke 321




COOS
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JACKSON
CURRY
JOSEPHINE

Code: TRANS

Scientific Name: *Trillium angustipetalum* (Torr.) J.D. Freeman
(***T. kurabayashii*** in Jepson)

Family: Liliaceae (lily family)

Common Name: Siskiyou trillium

Plant Description: Stem 2-7 dm. Leaves subsessile, 9-25 cm, sometimes lightly brown or dark green spotted. Flowers with sepals 3-6.5 cm long; petals 5-11 cm, linear; stamen 11-23 mm, tissue between anther sacs purple.

Blooming Period: March - May.

Flower Color: Dark purple.

Distinguishing Characteristics: One sessile flower, smells musty or fetid. Stamen less than 1.25 times ovary length.

Illus: Jepson 1209

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Similar Species: Both *T. albidum* and *T. chloropetalum* have a sweet rose-like or spicy flower scent, and both have stamen approximately 2 times the ovary length. Flower colors differ from the dark purple of *T. angustipetalum,* in that *T. albidum* has white to pink petals, and *T. chloropetalum* has greenish-yellow flowers, sometimes white (or purple, especially with age). Ovary and tissue between the anthers greenish for *T. albidum* (but purple for *T. chloropetalum*).

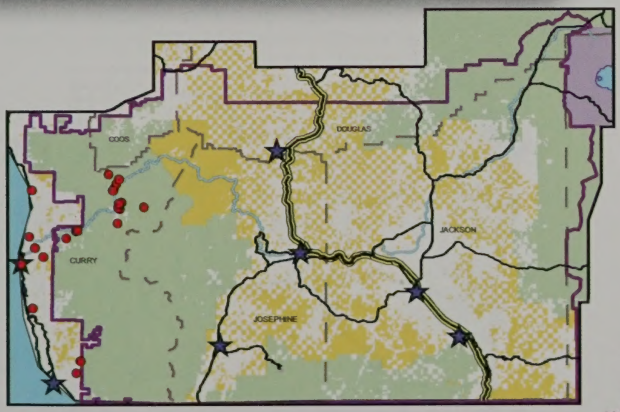
Habitat: Coniferous forest, woodland, and chaparral at low to moderately high elevations.

Distribution: Curry Co. in Oregon. In California, found in Del Norte Co. and disjunct to the Sierra Nevada and Santa Lucia Mtns.

References:

Eastman*	Jepson*
163	1206

* *T. kurabayashii*


COOS
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JOSEPHINE

Code: TRHEL

Scientific Name: *Triteleia hendersonii* Greene
var. *leachiae* (M.E. Peck) Hoover
(Brodiaea h.* var. *leachiae)

Family: Liliaceae (lily family)

Common Name: Leach's brodiaea

Plant Description: Slender scape 1.5-2.5 dm tall. Leaves usually 2, equaling or surpassing the scape. Scape 4-7 flowered, pedicels 12-25 mm long. Tepals 1.5-2 cm long.

Blooming Period: April - July.

Flower Color: White (or bluish-tinged) with a dark purplish-blue median stripe.

Distinguishing Characteristics: Filaments not winged nor strongly dilated, all are inserted at approximately the same level. Perianth lobes strongly spreading, tube slender at base, not inflated. Pedicels thread-like.

Similar Species: *T. hendersonii* var. *hendersonii* has pale yellow flowers.

Habitat: Wooded or open slopes, brush, forest and meadow edges.

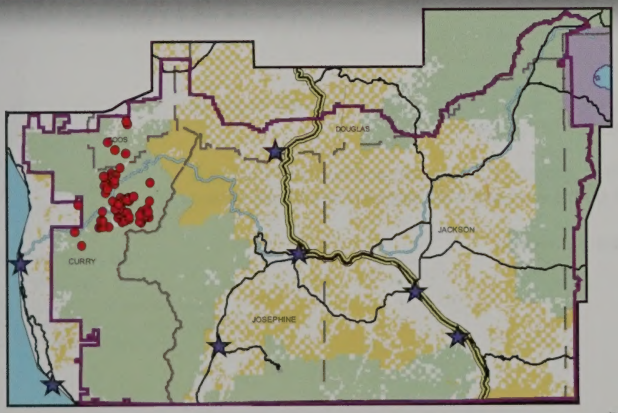
Illus: Abrams I-404

Distribution: Coos and Curry Cos. in Oregon.

References:

Abrams	H&C	Hitchcock	Eastman
I-404	685	762	165

[...All these references list sp. only...]


DOUGLAS
JACKSON
CURRY
JOSEPHINE

Code: TRIXA

Scientific Name: *Triteleia ixioides* (Ait. f.) Greene
ssp. ***anilina*** (Greene) Lenz

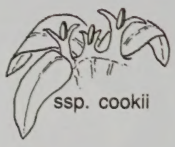
Family: Liliaceae (lily family)

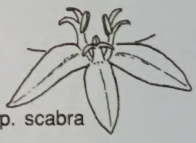
Common Name: Prettyface

Plant Description: Perennial from globose-like bulb. Leaves equal or longer than scape, green at anthesis, and 5-10 mm wide. Scape 2-4 dm tall. Umbel 5-30 flowered, bracts lanceolate, 1-1.5 cm long, the pedicels 1.5-2 cm long. Perianth light yellow (drying bluish), the divergent lobes > 2x as long as tube. Six stamens in 2 sets, one longer than the other; filaments winged the entire l ength, anther generally blue.

ssp. anilina

ssp. ixioides

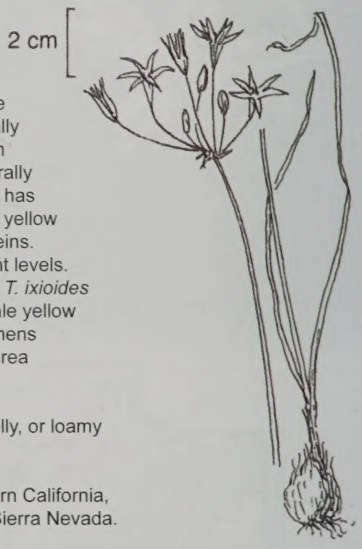

ssp. cookii


ssp. scabra

Blooming Period: May - July.

Flower Color: Light dull yellow, with a dark purple stripe.

Distinguishing Characteristics: Filaments with broad lateral wings, the acute tips of these surpassing the anthers.



Similar Species: *Triteleia* differs from *Dichelostemma* and *Brodiaea* by having 6 fertile stamens (instead of 3). *Dichelostemma* generally has a dense inflorescence while *Triteleia* has an open inflorescence. *Brodiaea* has leaves generally crescent-shaped in cross section while *Triteleia* has keeled leaves. *T. crocea* var. *crocea* has bright yellow flowers with prominent greenish to purple midveins. Stamens are attached to floral tube at 2 different levels. The most common species likely confused with *T. ixioides* ssp. *anilina* is *T. hendersonii*, which also has pale yellow flowers tinging blue when dry, but only has stamens attached at one level. All other species in our area have blue, purple, or white flowers.

Habitat: Open or shady places in sandy, gravelly, or loamy soil in chaparrel or open woods.

Distribution: Jackson Co., Oregon and northern California, southward on the east and west slopes of the Sierra Nevada.

References: Jepson
120

Illus: Jepson 1209
sp. only

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COOS
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JOSEPHINE

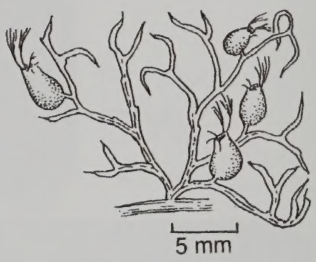
Code: UTMI

Scientific Name: *Utricularia minor* L.

Family: Lentibulariaceae (bladderwort family)

Common Name: Lesser bladderwort

Plant Description: Stems floating or creeping on the bottom in shallow water, thread-like, 1-3 cm long, and sparingly branched. Winter buds round, 1.5-5 mm long. "Leaves" 3-30 mm, 2-4 parted, divisions slender, flattened, entire, and of two types: the larger divisions usually without bladders; the smaller divisions with 1-5 bladders. Scapes filiform, 5-15 cm long, 3-6 flowered. Calyx lobes 1 mm long. Corolla pale yellow, upper lip 2-4 mm long and about half as wide, lower lip 4-8 mm long, spur very short and saccate. Capsule about 1 mm in diameter.



Illus: Jepson 737

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Blooming Period: June - August.

Flower Color: Yellow.

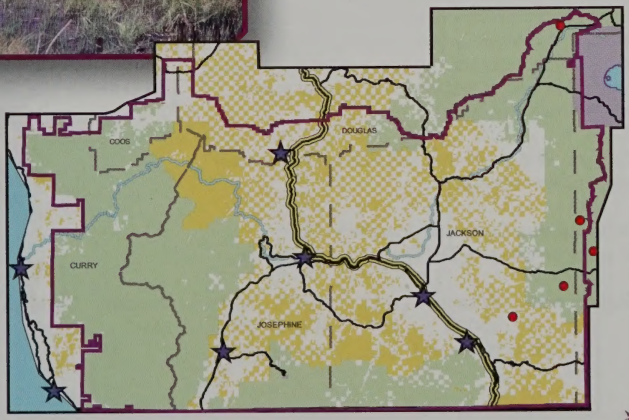
Distinguishing Characteristics: Delicate leaves scattered, 3-30 mm long, some bearing bladders. Pedicels recurved in fruit. Corolla spur very small to rudimentary. If flowering, bladderwort flowers resemble snapdragons.

Similar Species: *U. vulgaris* also bears bladders on leaves, but the leaves are bigger, 2-9 cm, the corolla is larger, 12-16 mm broad, and the spur is long and narrow. *U. intermedia* bears bladders on small root-like branches and the pedicels are not recurved in fruit.

Habitat: In ponds and bogs in shallow, standing, or slow moving water.

Distribution: Clackamas, Coos, Douglas, Harney, Jackson, Klamath, Lane, Linn, Marion, Wallowa, and Wasco Cos. (and possibly Baker and Grant Cos.), Oregon. Circumpolar in distribution.

References:	Abrams	H&C	HCOT	Jepson
	IV-12	446	IV-434	735


COOS
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CURRY
JOSEPHINE

Code: VIPRO

Scientific Name: *Viola primulifolia* L. **ssp.** ***occidentalis***
(Gray) L.E. McKinney & R.J. Little
(***V. lanceolata* ssp. *occidentalis***)

Family: Violaceae (violet family)

Common Name: Western bog violet

Plant Description: 8-19 cm tall. Leaves basal; blade 15-70 mm long; petiole 30-110 mm. Peduncle (flower stalk) 8-15 cm long. Petals 10-14 mm long (including the spur). The two lateral petals are bearded with long stiff hairs.

Blooming Period: April - September.

Flower Color: Petals white, the lower three with purple veins.

Distinguishing Characteristics: Perennial without obvious stem; hairless. Produces runners (stolons). Leaves arise directly from a short rootstock; blades elliptic to widely ovate, crenate, narrowed to a long, slender petiole. The only violet found growing in really wet areas.

Similar Species: There are many violets in our area, but only a few grow in wet conditions and *V. p.* ssp *occidentalis* is the only one growing in really wet areas. Of these other wet-habitat species, *V. mackloskeyi* has rounded (often hariy) leaves with some hairs on the petioles. *V. douglasii* grows in vernally wet areas, but not in such swampy conditions; it has a stem and gold-yellow flowers and compound or dissected leaves. *V. glabella* grows along streambanks and other wet places, but has a stem and deep yellow flowers. *V. palustris* has blue to purple petals (often very pale).

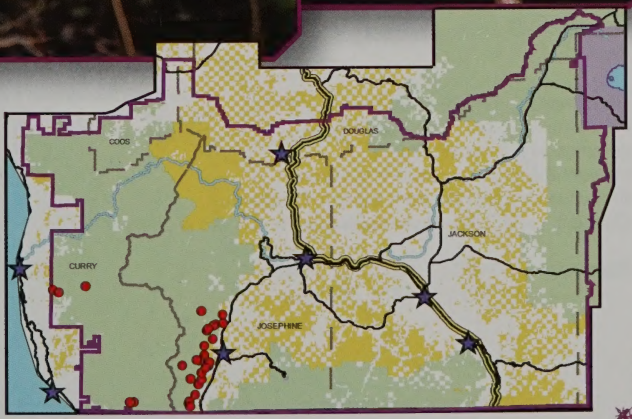
Habitat: Wet areas and serpentine *Darlingtonia* fens at lower elevations.

Distribution: Curry and Josephine Cos., Oregon, and nearby Del Norte Co., California.

Illus: Meinke 335

References:

Abrams	H&C	HCOT	Meinke	Jepson	Eastman
III-132	297	III-445	334	1092	169
[*V. occidentalis*]	[.....*V. lanceolata*.....]				


COOS
DOUGLAS
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JOSEPHINE

Code: WOCO

Scientific Name: *Wolffia columbiana* Karst.

Family: Lemnaceae (duckweed family)

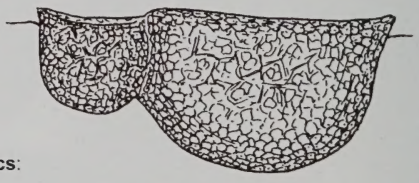
Common Name: Columbia water-meal

Plant Description: Globose, 0.8-1.3 mm; upper surface with 1-10 stomata. Thallus 0.5-1 mm.

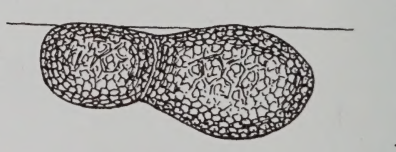
Flower Color: Plant transparent green.

Distinguishing Characteristics: One of the smallest flowering plants known on the planet. Plant body nearly spheric, central portion flat and floating above water. Without rootlets. Thallus just touching surface film. Without tiny white or brown dots on the plant.

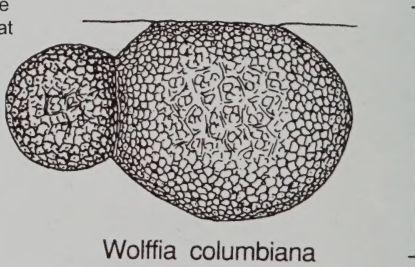
Similar Species: Can grow in mixture with *W. punctata*. *W. punctata* has an oblong thallus up to 1.2 mm long, about twice as long as it is broad. The upper surface is flat and floats at the water surface. It has tiny white or brown dots. Two other genera in this family, *Lemna* (duckweed) and *Spirodela* (duckmeat) are somewhat larger and have rootlets attached to the thallus. Also similar to *W. borealis* and *W. globosa*.



Wolffia borealis



Wolffia globosa



Wolffia columbiana

Illus: Jepson 1173

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Habitat: Free-floating in quiet water.

Distribution: Widely distributed in North America, but not particularly common in the Pacific States. Presumably more common in California. Known in Oregon only from Benton, Clackamas, Douglas, Lane, Linn, Multnomah Cos., and a site in Jackson Co.

References:

H&C	HCOT	Jepson
677	I-735	1170

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CHICAGO
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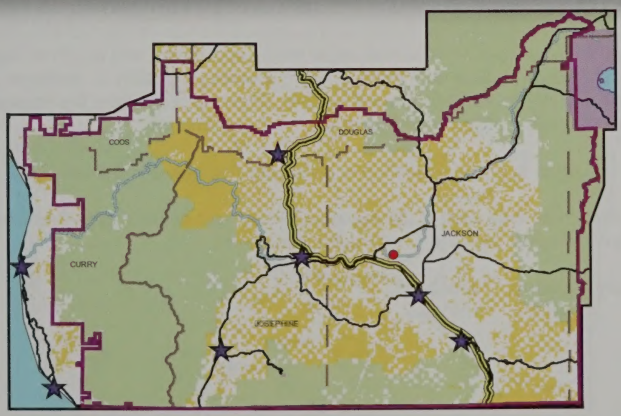
COOS
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CURRY
JOSEPHINE

Code: ZIFO

Scientific Name: *Zigadenus fontanus* Eastw.
(southwest Oregon plants formerly called ***Z. exaltatus***)

Family: Liliaceae (lily family)

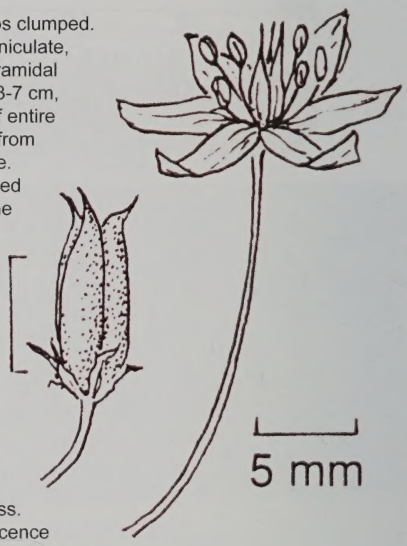
Common Name: Small-flowered death camas

Plant Description: Plants 30-90 cm, bulbs clumped. Leaves 10-25 mm wide. Inflorescence paniculate, with 1-15 branches, narrow, appearing pyramidal in early anthesis, terminal raceme 5-60 × 3-7 cm, lower branches 8-15 cm, 1/5-1/3 length of entire inflorescence; branches in fruit extending from main axis of inflorescence at 60°-90° angle. Tepals obovate, 5-9 mm long, cream colored with greenish base; filaments ± equal to the tepals; pedicels ascending in flower, bracts greenish to white and membranous, 3-35 mm.

Blooming Period:
May - June.

Flower Color: White.

Distinguishing Characteristics: Plants up to 1 meter tall and large leaves, up to 80 cm long and 2.5 cm wide. Perianth parts generally 8 mm or less. Mostly staminate flowers on lower inflorescence with pedicels ascending. This plant shares characters from three different species: *Z. exaltus*, *Z. fontanus*, and *Z. paniculatus*, and the nomenclature is still unclear.



Illus: Jepson 1213

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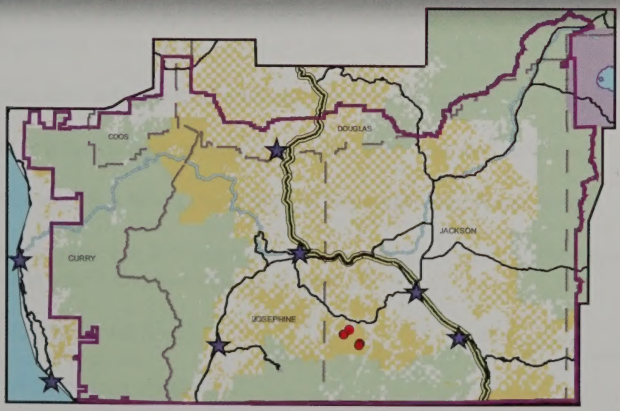
Similar Species: Other death camas species in our region possess leaves less than 16 mm wide; *Z. fremontii* occurs on the coast and has perianth parts 8-15 mm long and bisexual flowers. Plants from the Applegate Valley appear to be intermediate between *Z. exaltus* and *Z. paniculatus*. The differences between these two (and also *Z. fontanus*) are subtle, including whether the bulbs form clumps, the angle of inflorescence branching, whether the pedicels ascend or spread, tepal length and shape, and length of filaments. This plant shares characters from three different species: *Z. exaltus*, *Z. fontanus*, and *Z. paniculatus* and the nomenclature is still unclear. The collections from the Applegate Valley at the OSU herbarium are currently annotated as *Z. paniculatus*.

Habitat: Dry, open to partial shade, on south-facing slopes and ridgelines.

Distribution: In an area west of the Applegate River, east of Thompson Creek and south of the town Applegate, Jackson Co., Oregon; California.

References: Abrams I-375 Jepson 1211


COOS
DOUGLAS
JACKSON
CURRY
JOSEPHINE

Glossary

(Line drawings by R. Showalter)

achene. Small, dry, indehiscent, 1-seeded fruit from a 1-chambered ovary, often appearing to be a naked seed.

acuminate. Having a long, tapered, sharp tip, the sides of which are concave.

acute. Having a short-tapered, sharp tip, the sides of which are convex or straight and converge all less than a right angle.

alternate. Arranged singly and alternating along a stem. See *leaf positions*.

annual. Completing the life-cycle (germination through death) in one year or growing season, essentially non-woody.

anther. Terminal, pollen forming part of a stamen. See *flower structure*.

anthesis. Strictly, the time of expansion of the flower, but also used for the period during which the flower is open and functional.

apex. The part farthest from the base or place of attachment.

appendage. An attached, supplementary part.

appressed. Lying flat on the surface or on the axis of attachment.

ascending. Curving upward from base.

awn. Bristle-like appendage at the tip of a larger structure. See *grass diagram*.

axil. The upper angle between branch and stem.

axillary. Referring to leaves or flowers, growing from the axis.

axis. Line of direction, growth, or extensions; structure occupying such a position.

banner. The uppermost, often largest petal of many members of the Fabaceae.

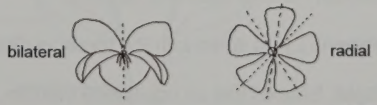
barb. Sharp, often downward, or backward pointing projections, like a fish hook.

basal. Found at or near the base of a plant or a plant part. See *leaf positions*.

bell-shaped. Referring to a flower that is shaped like a bell. See *flower shapes*.

biennial. Completing lifecycle in 2 years or growing seasons. Usually forms a basal rosette of leaves in year 1 and flowers-fruits in year 2.

bilateral. Referring to overall flower shape. Implies flower has two symmetrical sides. Opposite of radial.



bog. An acidic, wet area which only receives its water from precipitation. Bog is a common term used locally to describe a fen, which is similar to a bog but which has groundwater running through it.

bract. Reduced leaf at the base of an inflorescence.

bractente. With bracts.

bulb. Short underground stem and the fleshy leaves or leaf bases attached to and surrounding it, like an onion.

calyx. Collective term for sepals; the lowest outermost whorl of flower parts, generally green and enclosing remainder of flower in bud. Sometimes indistinguishable from corolla (as in many species of Liliaceae - see tepals). See *flower structure*.

capsule. Dry, generally many seeded fruit from a compound pistil.

caudex. Short, sometimes woody, base of the stem of an otherwise herbaceous perennial.

cauline. Borne on the stem above the base, not basal. See *leaf positions*.

chaff. Dry bracts. In Asteraceae, generally papery or scaly, often persistent bracts on receptacle.

collar. The back (generally the outer surface) of a grass leaf at the junction of the sheath and blade.

compound. Composed of two or more parts as in a compound leaf composed of leaflets or a compound pistil.

conical. (Conic) Having a 3-dimensional shape defined by a wide, more or less round base, the sides evenly tapered to a narrow tip.

cordate. Heart shaped; sometimes said of a leaf or leaf base. See *leaf shapes*.

corm. Short, thick unbranched underground stem often surrounded by dry (not fleshy) leaves of leaf bases.

corolla. Collective term for petals; whorl of flower parts immediately inside or above the calyx, often large and brightly colored. Sometimes indistinguishable from calyx (as in many species of Liliaceae - see tepals). See *flower structure*.

crenate. Scalloped (i.e. margins with shallow, rounded teeth).

culm. Hollow or pithy stems found in grasses and sedges.

cyme. A flat-topped or convex flower cluster with central flowers opening first. See *inflorescence arrangements*.

deciduous. Plants seasonally leafless.

decumbent. Lying down with the tip ascending.

deltoid. Shaped like an equilateral triangle, with one side as the base.

dioecious. Male and female plants separate. Individual plants produce only unisexual flowers.

disc flower. In Asteraceae, the flowers which have a small tube-shaped corolla.

ellipsoid. An elliptic solid.

elliptic. Shaped like an ellipse, both ends rounded about the same. See *leaf shapes*.

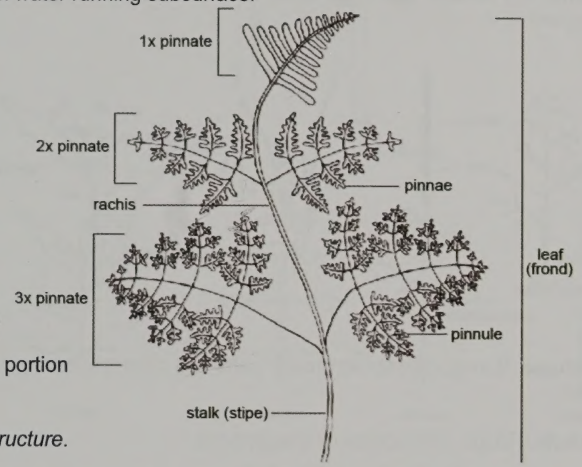
endemic. Native to a well defined geographic area and growing only in that area.

entire. Referring to a smooth edge without serrations. See *flower structure*.

exserted. Protruding, usually refers to stamens which extend past the corolla.

fen. A wet habitat, with water running subsurface.

fern diagram:



filaform. Thread-like.

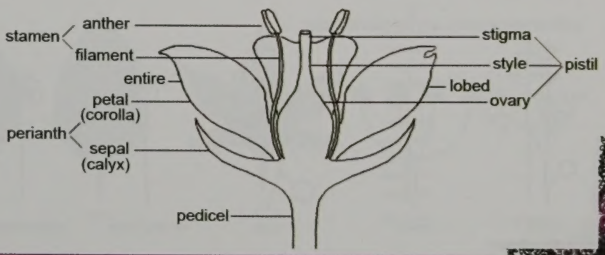
filament. Thread-like portion of the stamen.

anther. See *flower structure*.

floret. In Poaceae, a single flower and its immediately subtending bracts (generally lemma and palea). See *grass diagram*.

flower shapes:

flower structure:



follicle. Dry, generally many seeded fruit from a simple pistil, dehiscent on only one side, along a single suture.

frond. The collective term for fern leaves. See *fern diagram.*

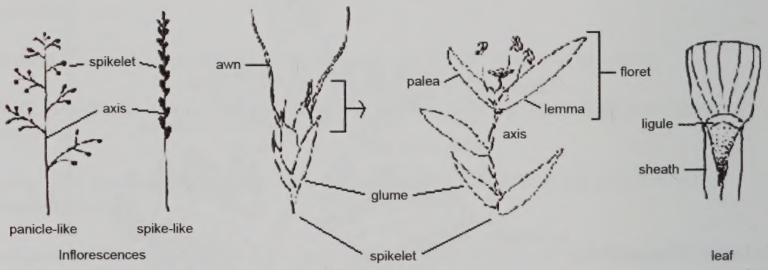
fruit. A ripened pistil with all its accessory parts.

glabrous. Without hairs.

gland. A depression, protuberance, or appendage on the surface of an organ, which secretes a usually sticky fluid; glandular (adj.)

glaucous. Covered with a whitish or bluish waxy or powdery film, sometimes easily rubbed off.

glume. In Poaceae, one of generally two bracts at base of grass spikelet. See *grass diagram.*



herbage. Non-woody, above ground parts of a plant, especially the leaves and young stem.

hirsute. Rough, with coarse or shaggy hairs.

hispid. With stiff, somewhat pungent hairs.

hybrid. A cross between two species.

hypanthium. A cup-shaped structure from which the petals, sepals and stamens arise; characteristics of the Saxifragaceae and Rosaceae.

indehiscent. Not opening to release contents. Generally said of fruit.

inflorescence. The entire flower cluster of a plant.

inflorescence arrangements:

raceme umbel cyme terminal spike terminal head panicle spike

involucre. A whorl of bracts at the base of an inflorescence. In Asteraceae, the combined phyllaries.

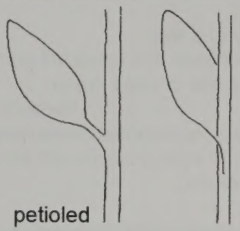
involucel. A secondary group of bracts within an inflorescence, like those subtending the secondary umbels in Apiaceae.

keel. A prominent dorsal ridge, like the keel of a boat; in Fabaceae, the middle boat shaped petal.

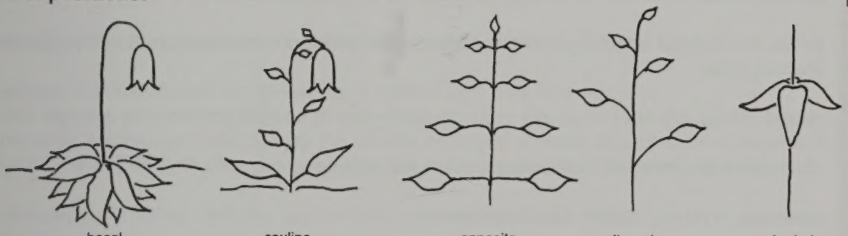
lanceolate. Length 3 - 4 times the greatest width, narrowing at end(s). See *leaf shapes.*

lateral. Referring to the sides of a structure, at or on the side.

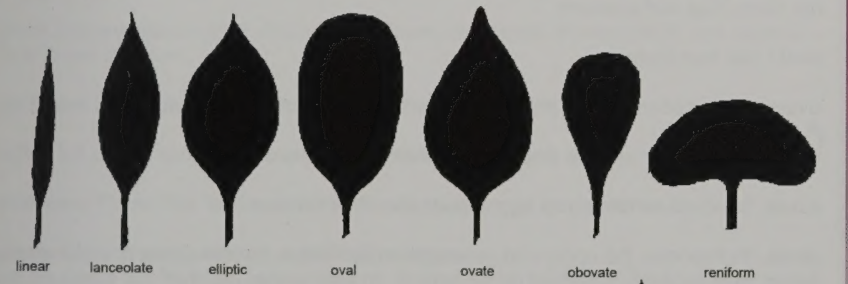
leaf attachment:

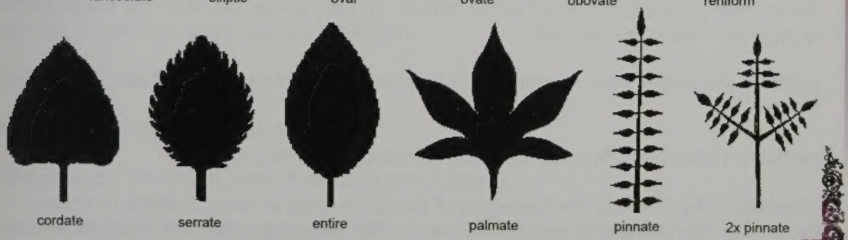


leaf positions:



leaf shapes:





leaflet. A leaf-like unit of a compound leaf.

lemma. In Poaceae, the larger of the two sheathing bracts that subtend a flower; the lowermost part of the floret. See *grass diagram.*

ligule. 1) In Asteraceae, the strap- or blade-like outer portion of the corolla in ligulate or ray flowers. 2) In Poaceae and other grass-like plants, an appendage at the juncture of leaf sheath and blade, generally with a membranous or fringed margin.

linear. Resembling a line; a long and narrow leaf with ± parallel sides. See *leaf shapes.*

lobe. A major extension or bulge, such as on the margin of a leaf or petal. Also the free tips of otherwise fused structures, such as sepals or petals.

margin. The edge, usually of a leaf.

midrib. The central rib of a leaf or other organ.

membraneous. Thin, pliable, sometimes translucent, or green.

mesic. Moist; neither wet or dry.

monoecious. Male and female unisexual flowers on the same plant.

node. Position on an axis (generally a stem) from which one or more structures (especially leaves) arise.

nutlet. Small, dry nut (or nut-like fruit), generally one of several produced by a single flower.

oblanceolate. Inversely lance shape. See *leaf shapes.*

obovate. Inversely ovate. See *leaf shapes.*

opposite. Located directly across from, as in leaves that grow across from each other on the stem. See *leaf positions.*

oval - See *leaf shapes.*

ovary. Ovule bearing, generally wider portion of pistil, normally developing into fruit.

ovoid. Egg-shaped in three dimensions. Widest below the middle.

ovule. Structure containing an egg; a seed prior to fertilization.

palea. In Poaceae, the upper and generally smaller of two sheathing bracts subtending a flower, itself generally sheathed by the lemma. In Asteraceae, the chaff-like scales on the receptacle. See *grass diagram.*

palmate. Radiating from a common point; generally said of lobes or leaflets. See *leaf shapes.*

panicle. A branched inflorescence. See *inflorescence arrangements.*

pappus. In Asteraceae, the aggregate of structures such as awns, bristles, or scales arising from the top of the inferior ovary, in the place sepals would be expected.

pedicle. A stalk of an individual flower or fruit. See *flower structure.*

peduncle. Stalk of an entire inflorescence or of a flower or fruit not borne in an inflorescence.

pendent. Drooping, nodding or hanging from a point of attachment above.

perennial. Living more than two years or growing seasons.

perianth. Calyx and corolla collectively, whether distinguishable or not. See *flower structure.*

peridotite. Plutonic rocks containing ultrabasic minerals such as olivine, pyraxenes, and micas.

perigynium. Sac-like structure enclosing the ovary and achene in Carex species.

persistent. Not falling off, remaining attached.

petal. A modified leaf, which protects the reproductive parts of the flower. Often white or brightly colored. See *flower structure.*

petiole. The stalk of an individual leaf, connecting leaf blade to stem. See *leaf attachment.*

phyllary. In Asteraceae, a bract of the involucre that subtends a flower head.

pinnae. A leaflet or primary division of a pinnate leaf. See *fern diagram.*

pinnate. A compound leaf, having the leaflets arranged on each side of a common petiole; feather-like. Odd pinnote is pinnate with a single terminal leaflet. See *leaf shapes.*

pinnatifid. Pinnately cleft into narrow lobes not reaching to the midrib.

pinnule. A division of pinna. Leaflets resulting from secondary division.

pistil. Female reproductive structure of a flower, composed of ovary, style, and stigma. See *flower structure.*

pistillate. Having fertile pistils but sterile or missing stamens.

pithy. full of soft, spongy tissue in the center of certain plants stems.

plumose. Plume-like; feathery; having fine hairs arranged around an axis.

pods. Any dry, dehiscent fruit; specifically a legume.

prickle. Superficial, sharp-pointed projection.

prostrate. Lying flat on the ground.

puberulent. Minutely pubescent.

pubescence. Short soft hairs. Pubescent (adj.), downy.

raceme. A simple elongated flower-cluster. See *inflorescence arrangements.*

rachis. The axis of a pinnate or pinnately compound leaf or flower cluster. See *fern diagram*.

radial. Refers to the overall shape of the flower. Implies the flower has more than two symmetrical sides. Opposite of bilateral. See *bilateral*.

ray. A primary radiating axis, as in the primary branch in a compound umbel of Apiaceae.

ray flower. In Asteraceae, the flowers which have one long strap-shaped "petal."

receptacle. In individual flowers, the structure to which flower parts are attached.

recurved. Bent backwards.

reniform. Kidney-shaped. See *leaf shapes*.

reticulations. Ridges or veins forming a network pattern.

rhizome. Underground, often elongated, more or less horizontal stem. Distinguished from root by presence of leaves, leaf scars, scales, buds, etc.

rosette. A cluster of crowded radiating leaves at the base of stem or the tip of a shoot.

salverform. Slender flower tube abruptly expands into a flat limb, as in phlox. See *flower shapes*.

scabrous. Rough to the touch, generally due to short, stiff hairs.

scape. A leafless stalk bearing an inflorescence.

scales. Any thin, scarious bract, usually a modified leaf.

scarious. Thin, dry, and membranaceous, not green.

sepal. Individual segment of the calyx, fused or not, generally green. See *flower structure*.

serpentine. Soils derived from rocks with an unusually high concentration of magnesium and iron; usually greenish in color.

serrate. Leaf has sharp teeth pointing forward.

sessile. Stalkless (no petiole, pedicel, etc.) - may refer to a leaf or flower. See *leaf attachment*.

sheath. Structure that surrounds or partially surrounds another structure, often tubular, as a leaf base in Apiaceae or Poaceae.

silique. A narrow many-seeded capsule of the Brassicaceae, with two halves splitting from the bottom with a partition between.

sinus. An indentation, as between adjacent lobes of a margin (in between petal lobes).
Spike. Unbranched inflorescence of sessile flowers.

spikelet. 1) In Poaceae, the smallest aggregation of florets plus any subtending glumes. 2) In Cyperaceae, the smallest aggregation of flowers and associated bracts. See *grass diagram*.

spine. Sharp-pointed projection, derived from leaf or other organ.

sporangia. In non-seed plants (fern allies and ferns), a spore-producing organ.

spur. Hollow, often cone-like projection or expansion, generally of a perianth part and containing nectar.

stamen. Male reproductive structure of a flower, composed of filament and anther.

staminate. Having fertile stamens but sterile or missing pistils.

staminode. Sterile stamen, often modified in appearance, sometimes petal-like or elaborate in structure.

stellate. Star-like, generally said of a hair with 3 or more branches radiating from a common point.

sterile. Not reproductively functional.

stipe. The main stem of a fern, below the fronds. See *fern diagram*.

stipule. Appendage at base of petiole, generally paired, variable in form but often leaf- or scale-like, sometimes a spine.

stigma. The terminal part of the pistil. See *flower structure*.

stolon. Runner; a normally thin, elongated stem lying more or less flat on the ground and forming roots as well as erect stems or shoots.

style. The contracted part of the pistil between the ovary and the stigma. See *flower structure*.

succulent. Juicy, fleshy and soft.

taproot. Main, tapered root that generally grows straight down into soil and has smaller, lateral branches.

talus. Relatively stable, sloping accumulation of large rock fragments, often at a cliff base.

tendril. A slender coiling structure (generally stem, stipule or leaf tip) by which a climbing plant becomes attached to its support.

tepals. One of the perianth segments in those flowers where there is no distinction between calyx and corolla (common in the Liliaceae).

terminal. At the tip or top end of a structure. See *inflorescence arrangements*.

ternate. Lobed or compounded into three parts, as a clover leaf. Teeth. A small, pointed projection of a margin.

thallus. A plant body not differentiated into root, stem and leaves.

tomentose. Covered with densely interwoven, generally matted hairs.

translucent. Transparent enough for light to pass through.

trifid. Tree cleft to about the middle.

truncate. As if cut off squarely at the end.

umbel. A inflorescence in which the pedicels all arise from a common point. See *inflorescence arrangements.*

urn-shaped. Shaped like an urn. See *flower shapes.*

vernal. Pertaining to the spring; vernally moist or wet refers to areas that are wet in the spring but usually dry up later in the year.

viscous. Sticky, glutinous.

whorl. Group of three or more structures of the same kind (generally leaves or flower parts) at one node. See *leaf positions.*

wing. 1) Thin, flat extension or appendage of a surface or margin. 2) In many members of Fabaceae, each of two lateral petals.

xeric. Dry.

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